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# INVESTIGATING FINANCIAL INNOVATION AND STOCK EXCHANGES: Marx, the Notebooks on the crisis of 1866 and structural changes in capitalism<sup>(\*)</sup>

**ABSTRACT:** Marx's Notebooks prepared in 1868 and 1869 (excerpts from *The Economist* and *The Money Market Review*) are an investigation on the crisis of 1866. Beyond a broad study of that crisis, they are an investigation of an emerging transformation of capitalism. They focus on leading industrial sectors (railways), financial innovations (such as limited liability firms and new types of shares and titles), and follow political measures undertaken in response to that crisis - dynamic new features of a system in its drive for survival. Those Notebooks might be material for a deep revision of his unfinished manuscripts for Volume III.

**RESUMO:** Os Cadernos preparados por Marx em 1868 e 1869 (notas do *The Economist* e do *The Money Market Review*) constituem uma investigação sobre a crise de 1866. Eles são também uma investigação de transformações em curso no capitalismo de seu tempo. As notas focalizam setores industriais líderes (ferrovias), inovações financeiras (empresas de responsabilidade limitada e novos tipos de ações e títulos) e acompanham medidas políticas tomadas em resposta a essa crise - novos recursos dinâmicos de um sistema que se transforma. Esses Cadernos podem ser material para uma profunda revisão dos manuscritos inacabados do Volume III de *O Capital*.

**Key words:** Karl Marx; MEGA; financial innovation, phases of capitalism.

**JEL Classification:** B14; B31

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## **INTRODUCTION**

This paper suggests that Marx's Notebooks B102-B108, B101-B109 and B105-B113<sup>1</sup> constitute, in themselves, a systematic investigation on the crisis of 1866. In this sense, one may compare the effort undertook in their composition to Marx's earlier notes on the Reports of British Parliament on the crises of 1847 and 1857, which were used in *Das Kapital*'s Volume III. Prepared between 1868 and 1869, these Notebooks may also be read as notes that complete an analysis of the sequence of capitalist crises – 1847, 1857, and 1866.<sup>2</sup>

These notebooks on the crisis of 1866 had as predecessors the notebooks on the crisis of 1857. This might indicate that Marx preparing the notebooks on the crisis of 1866 benefited from his previous organization of data and information on a specific crisis. Block and Hecker (1991), Hecker (2015), Krätke (1998) and Mori and Tamaoka (2015) had described these notebooks of 1857, their scope and their significance. Those papers allow a comparison between the two sets of notebooks. While Marxused the data and information from his notebooks of 1857 in his articles for the New York Daily Tribune, , in 1868-1869 he prepared the notebooks after the crisis and did not use thems in any known work (Takenaga, 2014, p. 54). However, the Notebooks of 1866 might have been more than a "storage of knowledge", to use an exprression suggested by Michael Heinrich during the debates fo the session on the notebooks (Tokyo, 28 March 2015). Given the detail and organization of Marx's readings from selected newspapers (specially *The Economist* and The Money Market Review), one may also suggest that they were made in preparation for further editorial work on his Das Kapital, since the topics broached in the notebooks are in line with his 1863-1865 manuscripts for volume III. The thread unifying these different stages of Marx's investigation may be his studies on capitalist crises and the role played therein by the credit system. The topic of crises connects observations that are presented in

<sup>&</sup>lt;sup>1</sup> The double numbering refers to the different archival codes assigned to each Notebook. The first number is the one written directly in the Notebooks, and used in Takenaga (2014), whereas the second one refers to the classification found in the index to the "Karl Marx/Friederich Engels Papers", prepared by the IISG. In this paper, whenever we use only one of these numbers, we are referring to the IISG classification.

<sup>&</sup>lt;sup>2</sup> To our knowledge, contrary to the crises of 1847 and 1857, there was no Parliamentary Report on the crisis of 1866. The archives available in the British Library (in October 2015) only lead to a Parliamentary Report on the Limited Liability Act of 1862 - a financial innovation close related to the nature of the crisis of 1866. Marx was aware of this Parliamentary Report, according to his excerpts from the period..

different parts of volume III, such as section III (the tendential fall of the rate of profit) and section V (money, credit and finance in the global dynamics of capitalism).<sup>3</sup>

This paper also suggests that Marxrecurrently stressed the changing nature of capitalist crises – crises have different causes and unfold in different ways. He was dealing with a capitalism that was changing fastly, as he comments in various places<sup>4</sup>,. That is why, since his very first comments on the crisis of 1866, Marx highlighted what was new: the crisis now assumed "[...] a predominantly financial character" (MEGA2, II.5, p. 540).

Finally, the paper aims to show that, in the course of his investigationsMarx was critically dealing with the contemporary literature on the 1866 crisis and its aftermath. In this sense, Marx was at least partially involved in the same intellectual milieu from which emerged both Juglar's (1862; 1892) works on business cycles and Bagehot's (1873) study on financial regulation. The paper is divided in three sections. The first locates the unfinished Volume III of Das Kapital within Marx's larger intellectual plans, highlighting how the MEGA2 project has been enhancing our understanding of his efforts towards completing his planned work. The second section deals with Marx's work on Volume III, showing how the analyses of the crises of 1847 and 1857 found in Part V might serve as a guide for his investigations of the 1866 crisis. The third section contains a short note on the singular nature of the crisis of 1866, and then presents a summary of Marx's readings from The Economist and The Money Market Review. The starting point is Susumu Takenaga's major stroke at unraveling the articulation and organization of Marx's notebooks B102-B108, B101-B109 and B105-B113. As Takenaga (2014, pp. 45-55) has shown, Marx composes the indexes (Register) to his notes thoroughly and in a crescendo, leaving footprints of his progress towards a fuller interpretation of the 1866 crisis. We deal, basically, with the outline prepared by Marx in the index found in notebook B101-B109 (pp. 286-287), which illustrates broad lines of the reasoning behind his interpretation of the crisis. The paper suggests, in conclusion, that the notebooks of 1868-1869 help Marx to take a further step in his understanding of crises and might have been an essential material

<sup>&</sup>lt;sup>3</sup> For the connections between those two sections, see MEGA2, II.4.2, p. 502, p. 531.

<sup>&</sup>lt;sup>4</sup> The increasing size of the accumulation of moneyed capital (MEGA2, II.4.2, p. 503), new forms of property such as shares, state debts, and others (MEGA2, II.4.2, p. 530), and their impacts on the structure of bank reserves (MEGA2, II.4.2, p. 520, pp. 524-525).

for a revision of Volume III. Therefore, Volume III may not be fully understood without the reading of those notebooks.

# I- MEGA2, VOLUME III: METHOD AND NEW INVESTIGATIONS

The incomplete nature of Marx's critique of political economy" has raised quite a few controversies. The MEGA2 project has significantly expanded our access to Marx's writings, and the comparisons it now allows between published and unpublished materialhas greatly enhanced our subsidies for a comprehensive understanding of his work. When we follow the way in which Marx used the notes and analytical schemes resulting from his constant reading of different sources, we may now question the hypothesis that Marx had abandoned the original structural plan of his work, drawn up in 1857, which foresaw the preparation of six books. Rather than recasting Rosdolsky's (2001) precious lesson on the subject, our intention here is simply to assert its continuing relevance as more advanced the studies from MEGA2 become.

Given this, it seems more useful to look for evidences of the firm consistency with which Marx pursued his theoretical project, scrupulously observing a method based on two orders of methodological and dialectical movements. What characterizes this methodological procedure is the coalescence of a method of presentation and a method of inquiry, in which the first must be presented as an irreversible journey of the concept, from its most abstract to its most concrete forms. In the case of the critique of political economy, the purpose is to make explicit the journey of capital, the effective subject of capitalism, from its first and most elementary form of existence as a commodity until its overwhelming domination of the world.

Within the structural plan of the project, this moment of culmination would be subject of a book entitled World Market and Crises.5 It would represent the complete actualization of capital as a set of singularities, of the disruption that arose as a result of the growing dominion exercised by capital over mechanisms that were earlier left to the free expression of the law of value. As seen by Preobajensky, this dominion over the workings

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<sup>&</sup>lt;sup>5</sup> Michael Heinrich has put forward an interpretation that there are "two different projects of Marx: the six-book plan from 1857 until 1863 and then on, as a new project, the four-book plan of *Capital* (W. Xiaping and M. Heinrich, 2011).

of the law of value, the managing by capital of what earlier promised to be the "truth of value", leads to the very destruction of the said law:

The *relatively* more perfect period for freedom of economic competition on a world scale, and consequently more favorable for the workings of the law of value, has been the classical era of capitalism, which preceded the transition to the imperialist stage. [...] The restrictions in competitive freedom also limit the workings of the law of value, causing it to meet with a series of obstacles for its expression, thus being partially replaced with that form of organization in production and distribution which capitalism can attain while remaining capitalism. [...] The law of value is reaching the stage of its own transformation and gradual disappearance through its own workings. (PREOBRAJENSKY, 1979, pp. 171-178)

Marx's dialectical exposition of the critique of political economy begins, in Volume I, with the operation of the law of value in its purest form: no concern for the effective differences between prices and values, all production absorbed in the market, and crises considered only as a possibility. In Book II, there are now sources of disruption interposed between production and circulation, with consequences over profits. In this context, there emerges a view of crises that traces their occurrence to disproportions among different productive sectors (GRESPAN, 1998). Book III is the foyer of the emergence of a world of various capitals, where the differences among them – their organic compositions and sectoral allocations – and the effective forms of competition cease to be assumptions to become part of a concrete capitalist dynamic. Crises emerge as a tendency that can only be counteracted through mechanisms of protection that arrest the law of value. These may involve the imposition of a managed social order dominated by money and power, not excluding the possible emergence of hybrid forms of social organization.

It is well known that Book III remained incomplete, being the object of Marx's attention until the end of his life. The privileged themes of these studies were economic crises; credit and banks; and land rents and agriculture in the United States, Russia, India, and Ireland. The themes that Marx continued to study after 1867 were not trivial. The choice of economic crises as an object of inquiry meant also opting to learn from the increasing complexity that every outburst of crisis brought along. During his lifetime, Marx still witnessed two further crises, in 1873 and 1882. Equally significant is the choice of the

agrarian structures of the United States and Russia as objects for study6 facing noncanonical realities. In fact,

Russia and the United States represented alternative ways of capitalist development. 7 Their choice as object of inquiry meant studying capitalism as a heteronomous and complex set, and thus striving to apprehend the concrete as "synthesis of multiple determinations, unity of the diverse".

## II- THE DRAFTS AND THE EXZERPTHEFTE

One point of departure to understand Marx in 1866 and 1868 lies in the years immediately before, when he managed to build the entire logical structure of his economic workIn fact, he only did feel able to publish his economic theory after he had in mind its complete framework. After the MEGA edition of the *four drafts* of *Das Kapital*, one can now access in detail the path toward the plan for the three books that Engels would eventually follow in his editorial efforts. In order to fully understand marxian approach to the 1866 crisis, we assume two points: first, that Marx had already established, in 1863, a plan for the third book<sup>8</sup>; secondly, that this plan would demand a new research effort when the time came to write the *third draft*, just in the eve of the Panic of 1866. 9

Shortly after concluding the Manuscript of 1861-1863, Marx drafted what would become the second and third books of *Das Kapital*, from 1863 to 1868.<sup>10</sup> Indeed, the *Manuskript 1863-1865*<sup>11</sup> contains the most important draft of Book III. It consists of seven chapters: 1) The conversion of surplus value into profit; 2) Conversion of profit into average profit; 3) The law of the tendency of the profit rate to fall; 4) Conversion of commodity capital and money capital into commercial capital and money-dealing capital or mercantile capital; 5) Division of profit into interest and enterprise gains. (Industrial or commercial profit). The interest-bearing capital; 6) Conversion of surplus profit into ground

<sup>&</sup>lt;sup>6</sup> See KRÄTKE, 2011, pp. 17-18.

<sup>&</sup>lt;sup>7</sup> See SHANIN, 1990, p. 119

<sup>&</sup>lt;sup>8</sup> See MEGA II/3.5, p. 1861.

<sup>&</sup>lt;sup>9</sup> It is not possible to approach here the entire developments from the *Grundrisse* (first draft) until 1863 (second draft). MEGA II/3.3, pp. 1137ff presents many determinations of a crisis analysis, but without precise conclusions. Marx was able to grasp the problem in more detail since 1857, although the form remained very tentative.

<sup>&</sup>lt;sup>10</sup> For the second book, he would write and rewrite its drafts until 1881. See MEGA II/11.

<sup>&</sup>lt;sup>11</sup> MEGA II/4.2, published in 1992, comprises the "Manuskript I", which was the basis for the publishing of Book III.

rent; 7) Revenues and their sources. <sup>12</sup> One can easily see that, although much remained to be done, even before the publishing of the first book, Marx had a great deal of his "artistic totality" before his eyes. In addition, even though he had developed many themes in the two first drafts, this was the first time that they were part of a logically coherent whole. When the time came to study the crisis of 1866, Marx had probably established the main structure of his theory, that is to say, he knew what he was looking for in 1868. Since the first published edition of the *Manuskript 1863-1865* emerged, more than twenty years ago, the so-called "Marx-Engels problem" has occasioned many debates about the use made by Engels of the drafts. <sup>13</sup> It would be pointless to review this debate here. Our purpose is solely to demonstrate how Marx himself followed the plan of 1863, and how complex his efforts would turn out to be throughout 1865 and 1866.

Already in the *Manuskript 1861-1863*, specifically in the section "Revenue and its sources", interest-bearing capital emerged as the "accomplished fetish": the formula G-G' is a synthesis of the entire movement from production (G-W-G), through circulation, the average rate of profit and finally, the ultimate fetish of capital. <sup>14</sup> The reification of capital – or fetishism in general – was precisely the point of view of vulgar political economy. In *Manuskript 1863-1865*, Marx departs from a similar point regarding joint-stock companies. This form of capital, according to him, is "the suppression of the capitalist mode of production inside the capitalist mode of production and thus one self-suppressing contradiction that expresses itself *prima facie* as simply a point of departure to a *new* form of the mode of production". <sup>15</sup> This new form would involve monopolies, state intervention, and a new financial aristocracy, "private production without private property". Credit would come to embody social, not private risks.

For the purposes of this paper, we may point out how far Marx had gone until 1866, and what he could expect from his studies about the 1866 crisis. This gives great

 $<sup>^{12}</sup>$  Those titles were atributed by the editors, following the structure of the text and of the edition of Volume III.

<sup>&</sup>lt;sup>13</sup> Some of the main contributions: Heinrich (1997), Volgraff und Jungnickel (1995), Krätke (2006). Before 1992, the Rubel's edition (1968) also tackles the problem.

<sup>&</sup>lt;sup>14</sup> MEGA II/3.4, p. 1453.

<sup>&</sup>lt;sup>15</sup> MEGA II/4.2, pp. 502-503. This passage would become the chapter 27 of the Book III.

importance to the fourth and fifth sections <sup>16</sup> of the fifth chapter of the manuscript of 1865. Here, Marx describes *The Economist* as able to grasp the surface of the problem – the capital fetish – but incapable of explaining its roots, that is to say, how interest-bearing capital is the instrument connecting objectified labor and living labor,. <sup>17</sup> Therefore, the main purpose of the analysis of credit in the 1863-65 draft was to delve into specific aspects of capitalist production. Marx still takes notes in order to clarify and circumscribe the analysis and the *Manuskript 1863-1865* sometimes presents a different order of exposition from that found in Book III. <sup>18</sup> It begins with a description of interest-bearing capital and its relations to productive capital, that is to say, the relations between interest and profit This allowed Marx to discuss the role of credit in capitalist production and the subject of crises from the perspective of the whole system. Following the order of exposition, he should also have dealt with the themes that would later become the fifth part of Book III, i.e., the relations among bank capital, money capital and real capital. The manuscript, however, ends at this point, hence warranting a closer examination.

One of the main features of the argument is the relation between credit expansions or contractions (money acting as capital) and the productive system, which includes money as a medium of circulation. In times of prosperity, the velocity of circulation of money will increase due to a growth in revenue, and the capitalist will demand more credit. This is the period of "most elastic and easy credit". In other words, the same amount of money provides a larger return for the many capitals; the capitalist's return materializes even before the actual sale of the commodity. This creates the illusion that credit is responsible for the expansion, and that a distinction really exists between money for the circulation of revenue and credit money. "The banks", says Marx, "smell a rat while their customers return more bills as money" In times of adversity, money as a medium of circulation suffers a contraction due to falling prices, wages, and volume of transactions. This fall in

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<sup>&</sup>lt;sup>16</sup> The fifth chapter has the following division: 1) The interest-bearing capital; 2) Division of profit. Interest rate. The natural rate of interest; 3) Interest and enterprise gains; 4) Reification of surplus value and capital relations generally in the form of interest-bearing capital; 5) Credit. Fictitious capital; 6) Pre-bourgeois.

<sup>17</sup> See MEGA II/4.2, p. 466..

The fifth section of Book III (fifth chapter of the draft) provides one of the best examples of Engels' procedure to establish the definitive edition. See MEGA II/14, p. 230ff. He decomposed the text in order to reconstruct it, always following the structure of the *Manuskript I* (1863-1865), but collecting and relocating its many quotations.

<sup>&</sup>lt;sup>19</sup> MEGA II/4.2, p. 509.

<sup>&</sup>lt;sup>20</sup> MEGA II/4.2, p. 510.

credit leads to increasing demand for "monetary accommodation". In Marx's words: "There is no doubt that, with decreasing credit, which itself coincides with the decrease in the process of reproduction, the *circulation mass* (...) required for circulation decreases, while the one for credit increases."21 In a crisis, credit works in order to guarantee that money functions primarily as money-capital, guaranteeing that part of the capitalist class has access to a major portion of all social savings. In this scenario, the profit rate has nothing to do with the level of interest. However, what Marx names "pressure for pecuniary accommodation" does not concern capital itself, but only banking capital, no matter of what kind. State papers, securities, bank notes, and mortgages appear here only as money-capital and, especially, as titles over capital itself: "This is very important; that such pressure on banking capital and its relative scarcity in respect to the demand for it is confused with a diminution of real capital that in such cases overstocks the markets."22 This causes a decrease in the banking capital that is transformed again into money and the capital available in society is turned into money capital, until its transformation into world money, with the decrease in national reserves of gold. During a crisis, after all, banks fear a drain of gold above everything else. Periods of crisis increase the demand not for capital, but for money itself, which is evident from the fact that crises exhibit an overstock of capital in all its forms. While it may seem that the money supply has decreased, in fact it is simply functioning as a medium of payment. Here crises assume their most complete character, forcing capital and financial instruments to return to their existence as money. Crises, therefore, bring about a fissure in the entire complex of categories, what is possible because the mass of capital(commodity or money) is different from the stock of fictitious capital. Marx takes this opportunity to explain the origins of this latter form of capital, be it public or private, in which "all connections with the real process of valorization are lost until the last trace, and the representation of capital as an automat that expands its own value is consolidated."<sup>23</sup> The question is whether this capital relates to a real accumulation process, or else to a plethora of overproduced capital. Marx considers that loanable, moneyed capital increases after a crisis, since there is more money seeking for investment opportunities that are no longer available. The contraction of productive capital implies relative or even

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<sup>&</sup>lt;sup>21</sup> Idem.

<sup>&</sup>lt;sup>22</sup> *Ib.*, p. 517.

<sup>&</sup>lt;sup>23</sup> *Ib.*, p. 522.

absolute increase of capital in its moneyed form<sup>24</sup>. A crisis begins with a constraint in production and a fall in the price level. This causes an increase in the mass of values of use in many nations at the same time, resulting in generalized balance of payments problems.<sup>25</sup>

Marx wanted to stress, firstly, the meaning of a crisis and its point of departure, and secondly, how it affected the money supply, credit and the balance sheets of banks. According to him, "after each crisis, the highest level of loanable capital of the previous industrial cycle becomes the basis or the lowest level for the next". <sup>26</sup> It is important to notice that, from this point onwards, the focus of the manuscript was mainly on two questions: money supply and quantity of circulation, and the volume of loanable capital. This implied a study of international bullion movements and of bank ledgers – phenomena that lay on the border between productive capital and loanable moneyed capital. One can thus see that Marx built his own approach towards capital and credit markets in 1865, when he wrote the fifth chapter of *Manuskript 1863-1865*. For him, 1865 would mark a new departure, as he announced to Engels in a letter from August 19<sup>th</sup>: "The critique of this sauce [the confusion] I can only give in a later writing." His research on specific aspects of the credit system and their relation to crises began simultaneously with the *third draft*.

In fact, with the *third draft*, Marx had established an agenda for further research: at that point, his theory met its object at a new level, different from the *Grundrisse* and the *Manuskript 1861-1863*.<sup>28</sup> The achievement of a logical structure that managed to connect *commodity* to *class*, as tentative as it was from Marx's "artistic" perspective, provided him with a new framework.

<sup>24</sup> *Ib.*, p. 541.

<sup>&</sup>lt;sup>25</sup> "Altogether the movement of moneyed capital (as it expresses itself in interest) is the contrary of productive capital." (*Ib.*, p. 542).

<sup>&</sup>lt;sup>26</sup> *Ib.*, p. 553.

<sup>&</sup>lt;sup>27</sup> MEGA III/13, p. 539ff.

<sup>&</sup>lt;sup>28</sup> The last part of the fifth section of the *Manuskript 1863-1865* – the so-called "the confusion" (MEGA II/4.2, p.561ff)— comprises a series of notes where Marx reiterated his perspectives on the money market, credit and crises. The selection of notes follows a few themes: 1) circulation of bills and bank notes; 2) drain of bullion; 3) exchange rates; 4) quantity of money; and 5) international trade. Two reports occupy most of the space: the 1857 *Report from the select committee on bank acts* [...], and the 1848 *Report from the Secret Committee of the House of Lords appointed to inquire into the causes of distress*.

# III- MARX'S NOTEBOOKS AND THE ANALYSIS OF THE 1866 CRISIS

The analyses of the crisis of 1866 relate it with the development of the business of railways, in other words, with a new capital market from the 1850s on. Takenaga (2014, pp. 36-45) presents an updated summary and reviews this literature. He describes how the "collapse of the stock market from the end of 1865 to the beginning of 1866 and the failure of the two large railway companies in which Overend and Gurney invested most of its funds [...] could not but reveal the difficulties in the management of Overend and Gurney". Relatedly, Cottrell (2004) explores the relationship between railways, the money market, stock exchanges and the crisis of 1866. For him,

""[...] the contractors' use, or rather misuse, of bills of exchange to sustain their activities became increasingly difficult from autumn 1865 as interest rates rose. Unable to raise further credit, many went bankrupt, with the greatest shock produced by the failure of Peto & Betts, major contractors.<sup>29</sup> Their collapse triggered on 'Black Friday', 10 May 1866, the closure of Overend, Gurney, the biggest London discount house, causing the worst panic since 1825." (Cottrell 2004, p. 259)

The author also describes the institutional development of financial markets, with special attention to limited liability firms, dividing their history into two phases: initial adoption (1855-85) and wider take-up (1885-1914).

Regarding the relationship between railways and finance, Ville (2004, p. 306) explains how "[r]ailways played an initiating and facilitating role in many capital market developments. [...] The railway companies themselves were the largest private business organizations of the mid-Victorian period and pioneers of many advances in the corporate form". These companies, according to Chandler (1990, p. 253) contributed to the evolution of capital markets, as "the new demand for railroad capital did lead to the development of new financial instruments – preferred stocks and debentures". Acheson et al. (2009, p. 1111) present data on the London Stock Exchange between 1825 and 1870 that indicates that railways were the most important security traded at the time: their sample of 681 companies (including banks and mining) contains 180 railway companies, the latter responsible for 329 out of 1,015 securities.

<sup>&</sup>lt;sup>29</sup> Marx did follow footprints of a chain that lead to the crisi (B101-B109, pp. 102, 211-212, 220; and B108, mp. 52)

<sup>&</sup>lt;sup>30</sup> See Chandler (1977, pp. 79-206) and the railways as the first modern industrial enterprises.

<sup>&</sup>lt;sup>31</sup> According to Mitchel (1964, p. 333), "probably the major influence of the coming of the railway was on the development of capital market and on the level of savings".

These studies help us identify the specific economic context experienced by Marx during 1868-69. The footprints he left, interpreted and organized by Takenaga (2014), illustrate the development of his studies. In section II, we suggested that Marx knew clearly what he was looking for in his excerpts. His starting point can be found in the index to Notebook B108 (pp. 84-86), where he organized data from the Bank of England and excerpted articles from *The Money Market Review* of 1867. This material came under five headings: 1) Bank of England and money market; 2) Stock and share markets Investments etc; 3) Companies; 4) Trade; and 5) Railways (Takenaga, 2014, pp. 46-47). Railways alone occupy a full page. The weight of statistical data indicates the empirical nature of this material: out of 86 pages, 56 contained tables of some sort.

This structure suggests the importance of the monetary and financial dimensions from the start. His writings on the "role of credit system" in MEGA II.4.2 (pp. 501-505) may have been the starting point for his research. Here, it seems likely that more was at stake than simply grasping the 1866 crisis – Marx would have certainly been curious to understand how the credit system allowed for the formation of railways. <sup>32</sup> As Takenaga (2014, pp. 45-46) has shown, Marx transcribed data regarding the ups and downs of the Bank of England discount rate during the 22 years since the Bank Act of 1844 (Figure 2 below). This would later be resumed in B101-B109, as a systematic search for episodes where the discount rate reached 10% – the level defined by the Bank of England after 11 May 1866, as a reaction to the bankrupcy of Overend & Gurney. Throughout that whole period (1,193 weeks), as Marx's table shows, the rate was at 10% for only 20 weeks and 2 days. Of these, 13 weeks came after 1859.

<sup>32</sup> Marx had already pointed out in Book I (p. 436) that railways were a product of credit and stock markets. In his manuscripts of Book III he discussed the "role of the credit system in capitalist production".

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SOURCE: B102-B108, p. 14

Marx also excerpted an article published in *TMMR* on 12 January 1867, describing 876 companies with "joint-stock shares, chiefly with limited liability", classified according to their activities: 283 companies appear as "manufacturing and trading", 147 as "mining", 108 as "banking" and "financial", and 44 as "railways". The table, reproduced as Figure 3 below, gives us a good picture of the state of stock markets *circa* 1860-1866. On the other hand, Michie (1999, p. 88) presents figures on the different sectors of the London Stock Market: in 1863, railways were around 25% of the stock market (and British government securities around 57%). Therefore, it is not surprising that Marx in 1868-69 devoted his attention to the nexus between railways and stock exchanges.

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SOURCE: B102-B108, p. 26 (*The Money Market Review*, 12 Jan 1867, p. 37)

Armed with broad pictures of two key dimensions under his investigations (the money market and stock exchange), Marx prepared Notebook B109, where excerpts from *The Economist* appear first. In this notebook, the index to the excerpts lists 17 headings, now including a specific topic on the "crisis of 1866" (Takenaga, 2014, pp. 47-48). Here, Marx fully transcribes the table published by *The Economist* on 19 May 1866 (pp. 57-58 – see Figure 1 above). The introduction to the table stated: "[I]t will be at once evident how much more rapid the calamity has been on this occasion than on any previous one" (p. 586). This table illustrates two signs of a crisis: a reduction in the reserve notes held by the Bank of England and an increase in the "minimum rate of discount" – 8% in 1847, 10% in 1857 and 1866. Together with his earlier notes on the Bank of England discount rate "in the last 22 years" (B102-108, pp. 12, 14), Marx's notes integrate fluctuations in discount rates with the development of three crises.

In the same notebook B109, Marx took notes from *The Money Market Review* – a more technical newspaper, according to Takenaga (2014, p. 45). His index is more elaborate, and the synthesis of his readings is found under the topic "Crisis of 1866", composed by seven headings A) Bank of England, Bank Act of 1844; B) Theory of Panic;

<sup>&</sup>lt;sup>33</sup> The title of the article is "The rapidity of the panic in 1866 as compared with that of 1847 and 1857".

<sup>&</sup>lt;sup>34</sup> As put forward in section II, Marx followed the size of the Bank of England reserves. In the published edition of Book III, there is reference to the "entire reserve of the Bank of England" being only £580,751 on November 12, 1857 (1894, p. 631). The table transcribed by Marx shows that the amount of "reserve notes held by the Bank" on November 14, 1857 was £957,710.

C) Securities and Panic; D) Joint-stock banks and other companies; E) Railways; F) Plethora of Money; and G) Limited Liability Act of 1862 (B101-B109, pp. 285-287). As the subjects indicate, Marx was now dealing with a capitalism that had monetary and financial institutions at its core. In fact, under heading A, Marx listed excerpts dealing with the actions of the Bank of England and the consequent debates on the Bank Act of 1844, which touched on the growing complexity of the British financial system, and the new developments necessary to cope with it. The second heading contains broader analyses of the nature of crises in general, and the crisis of 1866 in particular. *TMMR* reviewed at least three books in articles excerpted by Marx: *The crisis of 1866*, published by W. Fowler in 1866 (B101-B109, pp. 238-240); *Financial Lessons of 1866*, by an anonymous "city manager" (B101-B109, pp. 266-7); and *Monetary panics and their remedy, with special reference to the panic of 11th May, 1866*, by J. P. Gassiot (B101-B109, p. 278).

Fowler (1866) recognized a pattern in the recurring crises of the past decades: some isolated event spread distrust among the public, who looked for liquidity and thus caused unsound financial institutions to fail; these failures further undermined public confidence, bringing about a full-fledged panic. However, the distinctive features of the crisis of 1866 were its magnitude and suddenness. The event that triggered the panic was the failure of one of the longest-standing, most prolific discount houses of London, and the measures required to deal with it were accordingly severe, all of which contributed to making the crisis a remarkable event. In Fowler's words: "A Crisis marked by the largest failure ever known, and by a continuance of a ten per cent rate for fourteen weeks, will always be memorable" (1866, p. 1). Fowler was an adherent of the Currency School, and as such, he defended the appropriateness of the Bank Act of 1844 as an instrument of financial policy. In order to further his position, he drew extensively on the evidences presented before Parliament by both Lord Overstone and the Governor of the Bank of England on the aftermath of the crisis of 1857.

Financial Lessons of 1866 presented a different point of view, presented by TMMR in two parts. The first part was a long digression on limited liability companies, using letters written to *The Economist* before the panic in order to show how the Act of Companies of 1862 fostered the creation of "bubble companies" (p. 25). The author focused his analysis on "bad business", "which produced, or at least greatly aggravated last

year's crisis" (p. 6). To him, attention should be concentrated on businesses that raised funds relying on the 1862 Act (p. 7) – a legislation that allowed the creation of fraudulent schemes such as the "London, Chatham, and Dover Railway" (p. 17). *TMMR* showed how the book made "suggestions for the ammendment of the Companies Act 1862" that "point in the same direction" of a previous article in the newspaper (p. 31).

Finally, the review of Gassiot's book was used to support the newspaper's position in favor of the "total repeal of obnoxious clauses limiting the bank-note issues". Marx's selection of articles under the entry "Theory of Panic", therefore, highlights the connection between the panic of 1866 and one particular financial innovation – limited liability companies. Marx also excerpted an article from 19 October 1867 (B101-B109, p. 276) containing an analysis by the Liverpool Chamber of Commerce on "Commercial crises, trading upon borrowed capital". The piece evaluated common causes of the current crises in France and England (mostly related to the "American war"), and specific causes "peculiar to each nation". The causes specific to England were "premature investments from 1862 to 1866 in railway enterprises", "excessive speculation and overtrading", "reckless investment of capital in joint-stock companies of every description", "the collapse of several banks", and "two deficient harvests". This entry indicates that Marx was collecting evidence of the financial nature of the crisis, showing how an institutional innovation was crucial in preparing the conditions for both the rise and subsequent fall in investments.

The third heading ("Securities (Investments) and Panic") may constitute a systematic inquiry into the stock exchange of Marx's time. What did the *The Money Market Review* show his readership? Figure 3 reproduces a standard section of the newspaper: "The London official stock and share list".

<sup>&</sup>lt;sup>35</sup> The "city manager" kept contact with the newspaper – see *TMMR*, 10 Aug. 1867, p. 141-142, where one can find recommendations for joint stock companies and for the future of the Bank Act of 1844.

# FIGURE 3

618 THE MONEY MARKET REVIEW. MAY 5,	619
THE LONDON OFFICIAL TOWN ADD STREET LIST.  THE LONDON OFFICIAL TOWN	Company   Comp

SOURCE: The Money Market Review, 5 May 1866, pp. 618-619

TMMR carefully analyzed fluctuations in the value of securities in general, with a special focus on railway shares (both domestic and foreign, including USA and colonial possessions), in a section intitled "Stock Market of the Week", which was under Marx's constant scrutiny (B101-B109, pp. 190, 193, 218-219; B102-B108, p. 32). This may serve as a guide to understand the state of the stock exchange at the time. For instance, the issue from 19 May 1866 mentioned "government stocks", "guranteed Indian Railways", "foreign stocks" (Mexico, Italy, Spain, Brazil, and Turkey), "shares in the financial companies", "railway stock" and "bank shares". The section concluded evaluating that "most securities are at the present absolutely below their value", so that "purchasers may at the present moment secure handsome returns on the money laid out" (p. 664).

Heading D ("Joint-stock banks and other companies") is the longest in the index. There are articles covering specific banks (with special attention to Overend & Gurney, but also including Leeds Bank, Royal Bank of Liverpool, European Bank, etc), companies such as the Russian Iron Works and the Estate Investment Company, and the "increase of

<sup>&</sup>lt;sup>36</sup> The reliability of data from *The Money Market Review* is acknowledged by Chabot and Kurz (2009, p. 7).

employment of capital". There are also articles dealing with broader subjects, such as one published on 2 February 1867 that tried to defend the institution of "joint stock financing" against its abuses (B101-B109, p. 253). One can also find descriptions of swindles involving joint stock financing under investigation by the Justice<sup>37</sup> (B101-B109, pp. 199-200), and of difficulties in the management of new limited liability companies<sup>38</sup> (B101-B109, p. 275).

The fifth heading covered railways, and since this topic seemed deeply intertwined with the credit system in Marx's mind, one may interpret his extensive readings on railways as an attempt to understand how these could be financed beyond the resources of "individual capitalists" – thus configuring an extension of Marx's abovementioned studies on Notebook B108. The topics listed in the index outline a broad study on railways, dealing with several financial features that surrounded those high-tech investments. On Notebook B108, Marx had excerpted articles discussing the "stock market of the week" (p. 32), "railway dividends" (p. 74), "railway collapse" (p. 32-34), "railways accounts" (p. 75), and "railway reform" (p. 76). On Notebook B109, moreover, one can find a systematic investigation discussing the following topics: 1) railways and stock exchanges (B101-B109, p. 265) <sup>39</sup>; 2) railway finance (B101-B109, p. 191) <sup>40</sup>; 3) railway dividends (B102-B108, p. 74) <sup>41</sup>; 4) railway debentures (B101-B109, pp. 210, 241 and 244) <sup>42</sup>; railway reform (B102-B109, p. 251-252) <sup>43</sup>.

Under heading F ("Plethora of Money"), there are two articles. The first one, entitled "How is money to be employed" (B101-B109, p. 230), presented a survey of investment opportunities before concluding: "Although, therefore, there is not much room, in our view, for the investment of money in bank and financial shares, in British railways stocks, or telegraphy, there is ample scope at present in North American securities; and

<sup>&</sup>lt;sup>37</sup> "Joint stock promoting and financing - the story of Mr. Bernard Solomon Bernard" (*TMMR*, 21 Jul. 1866).

<sup>&</sup>lt;sup>38</sup> A conflict between the Hodges' Distillery Company and its shareholders (*TMMR*, 28 Sep. 1867).

<sup>&</sup>lt;sup>39</sup> "The year's fall in railway property" (*TMMR*, 15 June 1867, p. 694).

<sup>&</sup>lt;sup>40</sup> *TMMR*, 16 Nov. 1867, pp. 504-505; 8 Feb. 1867, p. 149; and 15 Feb. 1868, pp. 185-186.

<sup>&</sup>lt;sup>41</sup> "Railway finance and its mysteries" (*TMMR*, 16 Nov. 1866, pp. 504-505) and "Railway dividends and the doubts attaching to them" (*TMMR*, 23 Nov. 1866, pp. 532-533).

<sup>&</sup>lt;sup>42</sup> "Railway debentures" (*TMMR*, 15 Dec. 1866, p. 241) and "The new railway debenture law now coming into operation" (*TMMR*, 29 Dec. 1866, p. 733-734).

<sup>43 &</sup>quot;Can all railways of Great Britain be consolidated under one management?" (TMMR, 26 Jan. 1867).

there is a fair prospect that India and our other colonies will be able to offer us good security for much of our surplus earnings."<sup>44</sup> The second article, "Plethora of money", established a contrast between the availability of money, which "continues very plentiful", and the lack of "means of employment for accumulating capital"<sup>45</sup> (B101-B109, p. 255).

Finally, we come to the last heading, which discussed the "Limited Liability Act of 1862". On its first edition after the crash (19 May 1866), *TMMR* published an article on "The panic and the evils of the secrecy in the accounts of the financial companies", associating the spread of limited liability companies with the crash. The article further argued that "there were many errors and ommission in the Companies' Act which demand immediate attention and action of the Parliament" (p. 665). Marx excerpted these and other pieces that surfaced during this period of intense parliamentary action on the subject of financial regulation. Regarding the Limited Liability Act, there was "the appointment of a parliamentary committee on their operation" (B101-B109, p. 255). This same article offered a broad overview of the institution to be reformed:

Some of the statistics of joint-stock companies given by Mr. Watkins are exceedingly interesting. There are now, it appears, 2,200 joint stock companies in this country, with a capital of not less than one thousand millions, and with 750,000 shareholders or persons interested in these companies. Another class, which had grown up with them, namely, the director class, amounted to 12,500 in number. In the four years since the passing of the Limited Liability Act, Mr. Watkins said the companies formed under it had a capital of one hundred and fifty millions sterling and a paid up capital of thirty millions, and it is melancholy to reflect that a large proportion of this capital, nearly one third, appertains to companies now in liquidation.

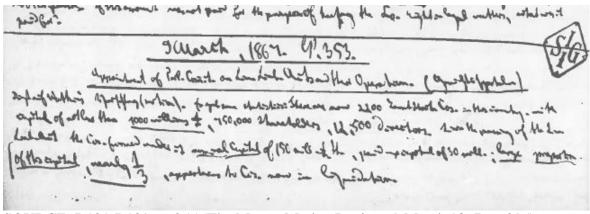
The abovementioned statistics were duly transcribed by Marx, as shown in Figure 4 below.

<sup>&</sup>lt;sup>44</sup> TMMR, 27 Oct. 1866, pp. 464-465.

<sup>&</sup>lt;sup>45</sup> *TMMR*, 2 Mar. 1867, p. 269.

<sup>&</sup>lt;sup>46</sup> *TMMR*, 9 Mar. 1867, p. 295.

## FIGURE 4



SOURCE: B101-B109, p. 255 (The Money Market Review, 9 March 1867, p. 295)

Marx's excerpts capture a time full of initiatives aimed to reform and correct problems related to the emergence of crises. The discussion of limited liability may be the most visible of these, as shown on heading G, but there were several others: railways, shares, debentures, the role of the Bank of England as "lender of last resort", protection of shareholders, transparency in capital accounts, etc. Marx might have been surveying a strong wave of institutional reform, brought about by the 1866 crisis, which would soon reshape capitalism – a reformist agenda that naturally involved strong calls for state intervention through direct legislative action, and which may have provided the conditions for the "rehabilitation of railway finance after the 1866 crisis" identified by Cottrell (2004, p. 267).<sup>47</sup>

As Takenaga (2014) suggests, the notebooks may have their own developing logic. Following this suggestion, the index for Notebook B102-109 (pp. 285-287) may help interpreting the one for Notebook B105-B113, where Marx would excerpt articles from 1868 and review two books. One clue that Marx is moving towards other aspects is the title

<sup>&</sup>lt;sup>47</sup> Mitchell (1964, pp. 335-336) presents data showing that between 1831 and 1919 there were five railway investment peaks (capital formation in UK railways greater than 20% of UK's gross capital formation): 1845-1849, 1863-1866, 1874-1875, 1883-1884, and 1897-1906. The debates on the problems of railway investments, and the institutional changes that followed them (all excerpted by Marx) may have been preconditions for new investment waves. In his notebooks, Marx could have been investigating how post-1866 changes might have contributed for subsequent peaks, as indicated in an article from *TMMR* (29 Dec. 1866) arguing that changes in the Limited Liability Act "at least affords this protection to investors in railway debentures", meaning that they "[r]emoved the one great impediment to railway progress" (p. 734).

of one the headings, dealing with the post-crisis environment: "2- crises und nachwirkungen", (B105-B113, p. 87).

#### CONCLUSION

The notebooks are a labyrinth, since they show how a collection of data relating to the financial world of the period might open new avenues for research. They also provide an opportunity to follow Marx's method of investigation unfolding, within a logic that Takenaga (2014) has captured and described. They conform a broad study of a crisis, an outline for an investigation of a specific phase of capitalism, and an investigation of measures undertaken in response to a crisis. Within them, one can alternately find:

- 1) A clear picture of the events surrounding the crisis of 1866, together with analyses and interpretations;
- 2) A summary of a long list of avaliable statistics (reserves, bank notes, clearing houses, joint-stock companies, capital structures, securities negotiated on stock exchanges, dividends, etc) a "storage of knowledge", to use Michael Heinrich's suggestion in Tokyo's discussions;
- 3) Indications of transformations under way in capitalism, caused on one hand by a type of leading companies (railways, joint stock companies) that depended on new credit institutions in order to appear and expand, and on the other by the changes in the financial institutions themselves (debentures, shares, stocks, limited liability companies);
- 4) Investigations of joint-stock companies and limited liability firms as a powerful counter-tendency to the fall of the rate of profit (MEGA2, II.4.2, p. 502);
- 5) Detailed descriptions of multifarious aspects of the complex machinery of financial markets, connecting bank reserves, shares, securities, and foreign exchanges;
- 6) An investigation of post-crisis measures, in particular the suspension of the Bank Act of 1844 with the purpose of containing the panic and its spread;
- 7) A description of the intense activities undertaken by Parliament in response to the crisis, which set about to reform, change, and improve legislations in order to adapt them to a new stage. This also indicated that important political and economic actors would not

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<sup>48 &</sup>quot;Crises and consequences"

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withstand government inaction: shareholders, investors, auditors, newspapers, the Bank of England, bankers in general, and the Chambers of Commerce were all taking steps to secure changes in laws related to the protection of investors and the financial health of institutions;

8) A wealth of material to be used in a future edition of Book III: new data, new information, new perspectives on the institutions described in the Manuscripts of 1863-65 - inter alia the lack of referenes to limited liability firms in Volume III of Das Kapital is an additional evidence that Marx would have done a huge editorial work.<sup>49</sup> The attention devoted by Marx on this new form of financial organization of firms in his Register for his notes of TMMR in B101-B109 is a strong clue of that editorial change.

9) an independent piece of analysis in itself, a source that can be read and studied to understand the crisis of 1866.

The notebooks, therefore, represent an investigation of a specific crisis, but they go much beyond that. In a larger sense, they are also an investigation of structural changes in capitalism, as illustrated by the intense legislative activity sparked by crisis of 1866. Marx's investigations on stock exchanges and related structural changes seem to have given him a new perspective from which to investigate changes in capitalism.

For instance, his investigations from Notebooks on the crisis of 1866 might have helped him to establish a clearer relationship between credit, joint-stock companies and railways. Pradella (2010, pp. 90-91) shows how the elaboration on centralization of capital was introduced by Marx in the French edition (in 1872-1875) - and included only in the fourth German edition -, in a long paragraph that highlights the relationship between credit, joint-stock companies, and railways:

But accumulation, the gradual increase of capital by reproduction as it passes from the circular to the spiral form, is clearly a very slow procedure compared with centralization, which has only to change the quantitative groupings of the constituent parts of social capital. The world would still be without railways if it had had to wait until accumulation had got a few individual capitals far enough to be adequate for the construction of a railway. Centralization, on the contrary, accomplished this in the twinkling of an eye, by means of joint-stock companies. (MEGA II.7, p. 549; and II.10, p. 563).

<sup>&</sup>lt;sup>49</sup> In fact, there is one reference to limited liability firms in Volume III, but it is in the Addendum 2 - *The stock exchange* - prepared by Engels (1894, p. 1047). The authors thank Alex Callinicos for this observation in a personal communication.

This passage identifies a revolutionary role for stock exchanges in a new stage of capitalism, probably a consequence of his investigations during 1868 and 1869.

Those changes, on one hand, pointed to processes that would only be completed in the United States – another variety of capitalism in formation. The transformations in the London Stock Exchange and the financial structure of British firms did not go very much further. With the privilege of hindsight, Hilferding (1910) showed how Germany (and the US) took this process further, effectivelly going from a "modern enterprise" – railways – to a "modern industrial enterprise"; financially, this meant the transition from joint-stock to corporate firms. Chandler (1990) described how the UK lagged behind Germany and the US in this transition, retaining a form of "personal capitalism" in contrast to the "managerial capitalism" emerged in the latter two countries. Marx might have sensed this process when he mentioned to John Swinton (interview in *The Sun*, 6 Sep. 1880) his interest in the credit system of the US. Sometimes structural changes in capitalism might be related to the emergence of new leading centers of accumulation.

On the other hand, these investigations may have helped his understanding of the complex nature of the expansion of capitalism to non-capitalist areas such as Russia. The institutions of capitalism investigated in the 1868-69 notebooks became part of Marx's framework; it thus became possible to integrate stock-exchanges, capitalism, and its expansion towards Russia within the same analytical effort. In a letter to Vera Zazulich, for instance, Marx wrote:

In descending from theory to reality, no one can disguise the fact that the Russian commune now faces a conspiracy by powerful forces and interests. Not only has the state subjected it to ceaseless exploitation, it has also fostered, at the peasant's expense, the domiciliation of a certain part of the capitalist system – stock exchange, bank, railways, trade... (Marx-Zazulich Correspondence, February/March 1881)

Selecting Russia and the United States meant not only choosing to study alternative paths to capitalist development, but also capitalism as a heteronomous and complex set. It meant understanding the concrete as "synthesis of multiple determinations, unity of the diverse" – precisely the level of abstraction planned for Book III of *Das Kapital*.

The intended use for the notebooks is very difficult to establish, maybe simply a matter for speculation. However, Marx's studies after the drafts of 1857 to 1867 followed a very clear agenda, revolving around the money market, international trade, credit, and crises. The notebooks from this period compose an important register for economic history

on their own right. When one analyzes the four sections of the complete works of Marx and Engels, their meaning becomes more than evident, with each section involved in the making of the other three.

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