

Project Title: “The London Metal Exchange: Origins and Impact on Global Trade through the First World War.”

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In 1877, a group of merchants interested in making London a marketing hub for non-ferrous metals established a commodity futures exchange known as the London Metal Exchange (LME). By 1914, the Metal Exchange had become the main market for derivative contracts and the world leader in pricing of copper, tin, zinc, lead, and aluminum. During this period – widely referred to as the Second Industrial Revolution – the LME played crucial intermediary role in forging new international business networks among North American producers and European consumers.

My research trip to England – generously funded by the History Project and the Institute for New Economic Thinking (INET) – was in large part a general investigation to learn more about the global historical role of the London Metal Exchange (LME) up through the First World War. It was also an opportunity to explore specific legal and financial issues related to the formation and growth of the exchange: What were the larger historical forces that encouraged the establishment of this institution? How was it financed? Who were the main parties involved in its establishment? What were the rules of the exchange and how were they enforced? Which state institutions regulated the LME? And finally, how was the exchange impacted by the war?

While historical literature on the London Metal Exchange is scarce, writings on the function of commodities exchanges in general are more prevalent. Questions raised in this literature include: Were commodity exchanges merely elite gambling markets (as has been suggested by some social historians)?¹ Or, were they useful institutions that helped improve pricing and the spread of information (as has been argued by economic historians)?²

In preparation to answer such questions, I conducted research at a number of archival institutions in London and Liverpool, including the British National Archives, the London Metropolitan Archive, and Guildhall Library. Additionally, I was invited to explore the archives of the London Metal Exchange.³

Visiting the LME building at 56 Leadenhall Street was the most useful part of my History Project/INET – sponsored trip. In addition to being granted access to the archival collection, I was invited to tour the exchange floor during trading hours and introduced to a number of

¹ Jonathan Ira Levy, “Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905,” *The American Historical Review* 111, no. 2 (2006): 307–35; David Hochfelder, “‘Where the Common People Could Speculate’: The Ticker, Bucket Shops, and the Origins of Popular Participation in Financial Markets, 1880–1920,” *The Journal of American History* 93, no. 2 (2006): 335–58

² Charles C. Cox, “Futures Trading and Market Information,” *Journal of Political Economy* 84, no. 6 (December 1, 1976): 1215–37.

³ This institution has been in existence for 138 years and maintains the only active trading floor in Europe.

non-ferrous metal experts who worked at the exchange as advisors or for independent firms as traders. The documents I recovered were rich and included first-hand accounts of trading activity during the late nineteenth century, LME board meeting minutes, instructional pamphlets for floor trading, dozens of old photographs, and access to numerous rare books published about the exchange and its founding members. From what I gathered from LME sources (and interviews), it appears that the idea for the Exchange was fostered by five distinct interest groups: (1) Swansea Smelters, (2) Merchants working in Chile, (3) Manufacturing companies in the UK, (4) Tin merchants working in South East Asia, (5) Non-ferrous traders from Europe. For all these groups, the biggest problem was consistent supply and demand of base metals. Without consistent supply of metals, prices fluctuated drastically. Often one shipment could be ruinous for a merchant if expensive goods arrived at port at the wrong time. Similarly, manufactures of brass goods could not fulfill orders if important industrial ingredients like copper and zinc were unavailable or too expensive. What changed the game for all these parties was the popularization of telegraph in the early 1870s. The telegraph made it possible for merchants to know the price of certain metals in London within a matter of minutes, thus signaling to them the potential value of their shipment. Manufactures and the smelters in Swansea naturally benefitted as well.

Eventually, the smelter owners of Swansea and their merchant business partners who were shipping Swansea coal to South America and coming back with Chilean copper bars, as well as manufacturers in Birmingham and Manchester all desired a location they could send representatives to engage in the buying and selling of physical metal and metal contracts on a daily basis.⁴ Two other groups of merchants, tin merchants of Asia and metal traders from Europe – helped round out the cohort of founding members.⁵

In addition to my work at the London Metal Exchange, I spent a good deal of time at the London Metropolitan Archives, which proved useful for records pertaining to individual electrical and brass manufacturing businesses that purchased copper from metal trading firms, most of who were active on the floor of the LME. During the era of electrification (1880-1930), copper was the most sought after commodity by electrical equipment companies. One of the major reasons the LME was able to become a world renowned institution was its connection to fabricators and manufacturers of electrical wire and dynamos who needed raw copper in the thousands of tons in order to fulfill the growing demand for electrical infrastructure. In order to fill orders from both refiners and manufacturers in Europe these companies would use the LME futures market to hedge against price fluctuations of copper

⁴ Henry Bath and Sons were amongst the original founders. They worked as merchants shipping coal and copper throughout the nineteenth century.

⁵ London Metal Exchange. Archival Collection Box 2. Blue Folder. “Board Minutes of LME, 1877-1924.” The tin contingency benefitted greatly from the completion of the Suez Canal, as their shipping times decreased from 6-8 months to 3 months. Three months was also the same amount of time it took Chilean ore to be shipped to England. Thus, the three month future contract became the standard. It remains the standard till this day. A European group emerged with strong connections to the banking interests of Frankfurt, Germany. This group was responsible for supplying Europe with non-ferrous metals from around the world. Merchant firm, Henry Merton & Company was the largest of the European connected firms. Merton & Co. was a subsidiary for Metallgesellschaft, the Frankfurt-based metal trading giant.

and other metals.⁶ Other records retrieved from the London Metropolitan Archive included the building and floor plans for LME over the years since the Exchange was located in the City of London.⁷

Records consulted while at the National Archives included a substantial collection of materials from the British Foreign Office during the war years, 1914-1919. These records proved exceptionally useful for understanding the bureaucratic interworking's of the British blockade of non-ferrous metals destined for buyers in Germany, Austria, and neighboring neutral states (Italy, Denmark, Sweden, etc). Files collected from Boxes 368 and 382 were especially rich sources for classified government reports on American metal companies that were active in selling copper to the Central Powers, namely the Guggenheim-owned American Smelting and Refining Company and Merton-owned American Metal Company. The National Archive also Board of Trade regulatory documents on the establishment of the London Metal Exchange, original charter documents, as well as important letters from members of the Exchange to and from the BT and FO during the war years.

A portion of my time was spent in Liverpool, where I perused collections of documents at the Maritime Museum and Archives. Here I found evidence that Liverpool was not only a town built on cotton and textile exports, but also warehoused tremendous amounts of copper during the nineteenth century.⁸ Many ships that were constructed in the harbors of Liverpool had their hauls lined with brass (combination of copper and zinc), and these shipbuilders, I found out were some of the largest consumers of copper prior to the 1880s.

While my explorations of these archives proved exceedingly fruitful, I was not able to find as much evidence detailing the number of contracts issued or exchanged at the London Metal Exchange as I would have liked. I believe most of these items are located at individual company archives, many of which are not available (to my knowledge) to the public or simply have not survived over the years. Collecting this kind of data of non-ferrous metal sales between specific producers and consumers from around the Atlantic is proving quite difficult. Although government and industry records explaining the volume of non-ferrous metals transferred between nations exist, I am again pursuing information from business records of individual trading companies in order to determine how companies decided when it was necessary to hedge forward purchases or sales and at what frequency. Thus, answering the historiographical question of whether the LME was positive or negative for economic growth in the metals industry (and for global consumers) would be premature at this point.

Overall, this History Project/INET-sponsored trip was a success and has greatly improved my understanding of commodities markets, futures markets, the London Metal Exchange and the role of this institution played in globalizing the non-ferrous metal trade. Additionally, the

⁶ Materials retrieved from the records of London Electrical Supply Company confirmed this.

⁷ It should be noted that many of the business records I consulted at the LMA were inherited by from the Guildhall Library and Archive since 2013. The Guildhall does still hold many useful secondary source books as well as records pertaining to the London Stock Exchange.

⁸ The London Metal Exchange begin warehousing non-ferrous metals in Liverpool in 1880 and continues to do so to the present day.

contacts I was able to make and cultivate along the way are only proving themselves more valuable with time.