

TITLE PAGE

What's in a Price? the American Raw Cotton Market in Liverpool and the Anglo-American war

Sheryllyne Haggerty

Department of History, University of Nottingham

sheryllyne.haggerty@nottingham.ac.uk

BIOGRAPHICAL NOTE

Sheryllyne Haggerty is a Reader in Economic and Business History at the University of Nottingham. She received her PhD from the University of Liverpool in 2002. Her main area of study is the business culture and trading communities of the eighteenth-century British Atlantic. However, she has also published on networks and visual analytics with Dr John Haggerty (Computer Science, Nottingham Trent University). Her monographs are *The British-Atlantic Trading Community 1760-1810: Men, Women, and the Distribution of Goods* (Leiden: Brill Press, 2006), and *'Merely for Money'? Business Culture in the British-Atlantic, 1750-1815* (Liverpool: Liverpool University Press, 2012). She has published in *Explorations in Economic History*, *Atlantic Studies*, *Business History* and *Enterprise & Society*. She also has published with Anthony Webster and Nicholas White (eds.), *The Empire in One City? Liverpool's Inconvenient Imperial Past* (Manchester: Manchester University Press, 2008).

ABSTRACT (86 words)

What's in a Price? the American Raw Cotton Market in Liverpool and the Anglo-American war

This article argues that an embryonic futures market was present in Liverpool during the Anglo-American war. The analysis of a previously unseen dataset of printed Prices Currents has facilitated not only a price series of raw cotton prices, but an in-depth analysis of the 'construction' of those raw cotton prices. By positing a definition of an embryonic futures market and then analysing each of the features of a such a market in turn, this study demonstrates the existence of an embryonic futures market in early nineteenth-century Liverpool.

KEYWORDS

Cotton Prices, Liverpool, Embryonic, Futures Market, Anglo-American War, Nineteenth Century, Providence, United States, Britain, Raw Cotton, Merchants, Dealers, Brokers, Manufacturers, Speculators

FUNDING DETAILS

This research was funded by an Alexander O. Viator Fellowship which the author held at the John Carter Brown Library, March to May 2014.

ACKNOWLEDGEMENTS

I would particularly like to thank the Reference and Manuscript Librarian at the John Carter Brown Library, Kimberly Nusco, for her help, depth of knowledge and enthusiasm. I would also like to thank Steve Toms and Siobhan Talbott for comments on early versions of this paper. All errors, are of course, mine alone.

MAIN TEXT

What's in a Price? the American Raw Cotton market in Liverpool and the Anglo-American war

Introduction

Cotton fascinates us, both as a consumable product and as a global commodity.¹ Indeed, there is a vast literature on the development of cotton markets and the construction of prices of cotton yarn and textiles.² However, as was noted by Peter Temin in 1967, 'The course of cotton prices has been recounted many times, but an *explanation* [author's emphasis] of their movements more often than not has been lacking'.³ Indeed, what work exists on the early Liverpool cotton market has much more to say about the development of specialist cotton brokers than the construction or making of price.⁴ This article redresses this imbalance. In particular, it argues that raw cotton prices were 'constructed' in Liverpool in the early-nineteenth century through an embryonic futures market. The first section outlines the sources and methodology used. The second discusses the participants and features of a modern futures market and posits a definition of an embryonic futures market. The third briefly charts the rise of cotton as an American agricultural product and its links to the port of Liverpool in the context of the Anglo-American War. The fourth section considers each of the participants and features of a modern futures market in turn in this historical context. The last concludes that there was an embryonic futures market in Liverpool at this time.

Sources and Methodology

The sources for this article are predominantly printed American Prices Currents sent from a variety of leading mercantile houses in Liverpool to their correspondents in Providence, Rhode Island between 1800 and 1820. These are held at the John Carter Brown Library (JCB), Providence, Rhode Island, USA. Prices Currents were originally quoted in manuscript form as an addendum to hand-written business letters. The main letter dealt with the particular business dealings of the correspondents, rumours and occasionally gossip, whilst the Prices Currents kept their correspondents up to date on prices and supply and demand of a

variety of commodities particular to their market. The earliest printed Prices Current found for Amsterdam dates from 1585.⁵ However, they were printed in a more standard format from the 1790s onwards which facilitated the consistent listing of far more commodities, and their various grades. Although hand written Prices Current persisted into the nineteenth century, possibly for their personal touch, printed versions soon became the norm globally.⁶ Therefore, the collection at Brown also includes Prices Current from ports such as Havana, Copenhagen and St. Petersburg. They are also extant for Paris and Antwerp for the early nineteenth century although they were used much earlier.⁷ British colonial markets such as Kingston, Jamaica, Nassau in the Bahamas, Barbados and Grenada all produced their own printed Prices Currents by the early nineteenth century.⁸ They all followed a standard format, depending on the market. Importantly for this study, they usually provided an expansive explanatory text which gave reasons for the changing prices, as perceived by the merchants sending out the information. These included the success or failure of harvests, financial failure, the activities of speculators, political news and rumours. The Prices Currents for Liverpool sent to Providence all followed this trend. They are therefore an extremely useful, if under-utilised source. A one hundred per cent sample was taken of all extant Liverpool Prices Currents found in the Brown Family Business Papers and the Arnold Family Business Papers at the JCB dated January 1800 to December 1819.⁹ The dataset presented here was constructed from a variety of files within those two collections. Despite some gaps in the data, which preclude a more quantitative analysis, this collection facilitates a very detailed price series of the various grades of raw cotton in the Liverpool market.¹⁰

Prices were taken for the following cotton types, and where available, the various grades: Georgia Uplands, Sea Island, and New Orleans. These represent the early successful crops in the United States (for the short-staple Georgia cotton and Barbados long-staple cotton from the Carolinas) and after the 1803 Louisiana purchase, the popular short-staple New Orleans.¹¹ These were also the most reliably recorded in the Prices Currents. Where multiple Prices Currents are extant for one month, each month's prices may be taken from more than one Prices Current, with (for consistency) the highest quoted price for each type and grade recorded in the database.

Participants and Features of a Futures Market

The history of futures markets often centres around the Chicago Board of Trade (grain) established in 1848, or the Chicago Produce Exchange (perishable goods) established in 1874 (later the Chicago Mercantile Exchange).¹² Other futures markets usually noted include soybeans, crude oil, hogs, gold and silver.¹³ This focus on the mid-nineteenth century continues despite the fact that in 1982 Jeffrey Williams noted forward trading in London in the seventeenth century for herring and grain.¹⁴ Cotton is not mentioned very often, and indeed, as David Williams noted in 2000, ‘We know little about ... the beginnings of futures trading’ in cotton at Liverpool.¹⁵ This is particularly strange given that today, fifty per cent of the world’s international cotton contracts follow the Liverpool Cotton Association rules developed in that city during the first half of the nineteenth century, and first written as formal rules by the Liverpool Cotton Brokers association in 1864.¹⁶ Indeed, it is around this date that conventional wisdom tells us ‘true futures dealings came about’.¹⁷

However, definitions of a modern futures market are narrow – requiring only the existence of a formal exchange (site), with written rules and regulations and standardised futures contracts.¹⁸ Nevertheless, understanding how a futures market *actually works* requires a wider conceptualisation. For example, futures markets have particular participants. Indeed, futures markets only exist because certain actors (usually dealers) want to reduce their exposure to price risk.¹⁹ These actors include: dealers (hedgers) who are usually risk averse and want to reduce their exposure to price fluctuation; speculators, who seek to profit from price variability (including arbitrageurs), and brokers, who deal on behalf of those who are not part of the formal exchange.²⁰ In our historical context, other purchasers of cotton included manufacturers, akin to the dealers in terms of trying to reduce their exposure to price risk. It will be demonstrated that all these participants were present in the Liverpool raw cotton market in the period under discussion, and that they helped to shape the construction of price. There are also several features of futures markets. Reliable and known grades of commodities are a “prerequisite”.²¹ Cotton falls into the agricultural commodities category, and is known as a soft commodity (food and fibres).²² In the raw cotton market, quality is assessed on grade, colour, staple length and character (which might include uniformity, fineness and strength of the fibre).²³ Interestingly, many of the grade names from the early nineteenth century are very similar for those in the twenty-first.²⁴ There is also usually a wide variation in price. These price differentials reflect the quality as

well as the (present and assessed future) demand of any particular quality or grade of commodity, though it is worth noting that prices of different qualities and grades do not always follow the same trend as purchasers choose different qualities when some are scarce.²⁵ This price variability creates uncertainty, which is what dealers (hedgers) try to negotiate through the futures market.²⁶ Indeed, a primary function of futures markets is the discovery, or ‘construction’ of prices, in that the market mediates news of possible supply shocks by disseminating information.²⁷ The construction of price therefore includes present supply and demand, but also considerations of future supply and demand, whether affected by rumour, harvests, war or other political crises. Added to this uncertainty are the elements of time and space, calling for fulfilment of a contract at some future date. Such future delivery can add transport and storage costs, which feed into the basis (the price spread between the cash price and the futures price).²⁸ Future delivery requires futures contracts, which are highly fungible financial instruments traded on an organised futures market. They are independent of the identity of the buyer and the seller, and the holder of a futures contract may never own or possess the actual commodity. It is also worth noting that forward contracts are also common within a futures market, but they are not standardised or traded on organised exchanges.²⁹ ‘To arrive’ contracts are also closely related to futures markets; the only distinction is who pays the loading and unloading fees.³⁰ It will be demonstrated that many of these features were present in the early nineteenth-century Liverpool raw cotton market.

As noted above, the modern definition of a futures market is narrow. This article does not seek to question this view of a *modern* futures market, but it does argue that an embryonic futures market was in existence on early nineteenth-century Liverpool.³¹ To do so it defines an embryonic futures market as:

*One which exhibits many (if not all) of the participants and features of a modern futures market, but which is in a rudimentary stage with potential for development.*³²

Indeed, the wider literature on modern futures markets outlined above argues strongly that the various participants and features of a futures market are essential features. Therefore, if we base our analysis on these participants and features rather than an arbitrary narrow definition we come to a more subtle and

nuanced understanding of how futures markets *work*, and can clearly see that an embryonic futures market was in existence in the early nineteenth-century Liverpool raw cotton market.

The Rise of Cotton and the Liverpool Market

Cotton agriculture in the United States boomed from 1795, surpassing rice, tobacco and indigo by 1801.

Table 1 shows the rapid rise in the production and export of US cotton. Northern ports, including Providence, quickly took on an important role as entrepôts in the United States' cotton trade.³³

Table 1: Bales of US Cotton Produced and Exported 1791-1821

Year	Produced	Exported	% Exported
1791	9,000	890	9.9
1801	211,000	92,000	43.6
1811	269,000	209,000	77.7
1821	647,000	449,000	69.4

Source: Bruchey, *Cotton and the Growth*, Table 3A.

Steady imports of cotton were evident by 1756 in Liverpool.³⁴ Before 1780 however, most of this came from the Levant, some small amounts came from the West Indies, and after 1781, Brazil. A little came from India via the East India Company, but this was never very successful because the very short staple was not suitable for the new industrial processes.³⁵ However, in 1800, 40,000 bales of cotton arrived from the US alone.³⁶ During 1806-1810, 107,500 bales were imported into Britain from the United States out of a total of 202,290. In contrast, cotton from the British West Indies and Brazil was each only around 32,000 bales.³⁷ By the beginning of the nineteenth century, a vast and intricate web of commerce had already created a regional, national and global interest grounded in the raw cotton of the lower south.³⁸ This sudden rise had been assisted by a number of improvements and inventions in the later 1700s. In Britain, Richard Arkwright patented his water frame in 1769 and in 1770 James Hargreaves patented his Jenny.³⁹ Both increased productivity, but neither produced the range of yarns that textile manufacturers required.⁴⁰ However, in 1779

Samuel Crompton introduced the mule on which spinners could produce multiple yarns in a range of sizes.⁴¹ By 1800 steam powered mules carried over 250 spindles, increasing cotton yarn production greatly.⁴² In the United State the saw cotton gin allegedly patented by Eli Whitney in 1794 was very important in meeting the increased demand for short-staple cotton which was used for mass coarse yarn production.⁴³ Yarns made from Sea Island long-staple cotton, which was also important in the Liverpool cotton market, was more expensive to produce but was considered essential for spinning fine and strong yarns.⁴⁴ By 1795 cotton was being grown in large amounts in the United States, and Liverpool was the leading importer of cotton in Britain.⁴⁵ Table 2 shows the large-scale of imports of US cotton into Liverpool despite the increasing tension and subsequent Anglo-American war, making that port an excellent case study for the analysis of raw cotton prices in Britain.

Table 2: Imports of Cotton into Liverpool 1807-1814

Year	No of Bales
1807	143,756
1810	199,220
1812	79,258
1813	18,640
1814	40,448

Source: Ellison, *Cotton Trade*, pp.170-71; 1812-14, Daniels, ‘American Cotton Trade’ p.278. ¹

Indeed, the relationship of Liverpool with US cotton continued to develop despite the context of the French Revolutionary and Napoleonic Wars and the Anglo-American War of 1812-14.⁴⁶ There was a brief respite between 1801 and 1803, but Britain’s Orders in Council of 1805 brought in a strict system of blockades, and Napoleon’s Milan and Berlin Decrees brought in the continental blockade and declared hostility against American shipping which further affected cotton supply and demand between 1806 and 1813.⁴⁷ By 1807 English actions against American shipping had caused major political tensions, exacerbated by the ‘Chesapeake’ affair in June of that year.⁴⁸ This culminated in the American Embargo of 1807 (and

¹ Daniels does give some prices for raw cotton 1807-14 but only for Bowed and Sea Island, and the analysis is of the market in the United States. His figures are far less than listed by the Rathbones in 1812.

subsequent Non-Importation Acts), and eventually the Anglo-American war of 1812-14.⁴⁹ However, throughout these tensions the Liverpool merchants continued to correspond with their American contacts as often as they were able, which was good business practice.⁵⁰

An Embryonic Futures Market⁵¹

Participants

All of the participants in a modern futures market were present in early nineteenth-century Liverpool. The dealers included the merchants, of whom there were 986 by 1805, although only Thomas & Robert Tattersall, and Thomas Jameson listed themselves specifically as cotton merchants.⁵² Whilst there were seven cotton dealers listed in *Gore's Directory* in 1805, all of those sending Prices Currents to Providence listed themselves as simply merchants (except for Conway & Davidson who actually listed themselves as Corn Merchants). Most merchants in this period dealt in a wide range of commodities, sometimes specialising by region. These merchants, or dealers, were mostly hedgers, in that they were risk averse. For example, in 1811, Hughes & Duncan bemoaned the overtrading which had caused so much financial suffering, and particularly 'by the rage for speculating'.⁵³ They clearly saw themselves as 'respectable' traders apart from the speculators. Hughes & Duncan, like many other merchants, were also averse to high-risk taking. For example, Rathbone & Co. hedged even within cotton by buying cotton from the US, but also from Demerara and Surinam.⁵⁴ Speculating was seen as akin to gambling and came under increasing criticism from the later eighteenth century onwards, as did stock jobbing.⁵⁵

The sources do not tell us the number of speculators, nor their names, but it is clear that they were an important part of the market at certain times. In August 1809, 3,000 bags out of 7,900 were bought on speculation.⁵⁶ In September of that year Morrall & Borland reported that 30,000 out of 40,000 bags had been sold to speculators.⁵⁷ In 1813 William & Richard Rathbone complained that the speculators 'were extremely active for upwards of fourteen days', purchasing nearly 35,000 bags, after which time sales were sluggish as a consequence.⁵⁸ Speculators were unpopular with dealers. Joseph Howell blamed them when the price of

Uplands rose from 16d in December 1807 to 19.5d in February 1808.⁵⁹ Later the same year Buchanan & Benn similarly blamed the speculators for pushing the price of cotton ‘materially above its relative [real] value’.⁶⁰ Indeed, it was noted by Conway & Davidson that when speculators kept out of the market, prices were steadier (safer for the dealers).⁶¹ It is difficult to know whether the sub-category of arbitrageurs were present. However, it is most likely that at the very least speculators invested in various types of cotton as well as other commodities. The speculators were most likely higher-risk taking merchants who had cash to spare, but even those merchants involved in the high-risk slave trade had a wide portfolio through which they reduced their exposure to risk overall.⁶²

It is likely, as Dumbell suggested, that a specialisation towards a separate category of cotton brokers developed at this time, if slowly.⁶³ In 1805, 196 traders listed themselves as brokers, but only eight listed themselves as cotton brokers.⁶⁴ Many of these had good contacts with Manchester, the main distribution centre for raw cotton. These included George Marsden who appeared to be McConnell & Kennedy of Manchester’s main raw cotton supplier.⁶⁵ In fact, many brokers may have come from Manchester (as did Nicholas Waterhouse a well-known cotton broker) because they understood the quality and grade requirements of the manufacturers. Brokers extended credit in terms of paying freight, import duties and insurance, as well as processing Bills of Exchange, thereby acquiring the ‘right’ to future sales.⁶⁶

Reliable and Known Grades

Reliable and known grades clearly existed for both Old World and New World grades of cotton by the 1810s. Rathbone, Hughes & Duncan regularly listed prices for Surats (from India), as did Morrall & Borland.⁶⁷ Bengal and Smyrna cottons were also regularly listed.⁶⁸ Moreover, many grades of cottons from the Americas were increasingly, and more regularly, listed. It may be a function of the fact that the Prices Currents used here were mainly for American producers, but it is notable that for the most popular cottons, Uplands and Sea Islands, many definable grades were listed. Given that these cottons were only grown in any large quantity from the mid-1790s, this is remarkable. Uplands were listed by such grades as Poor/Ordinary, Fair, Good, Fine, New and Prime. Sea Islands also had several distinctions: Ordinary,

Stained and Inferior, Middling, Good, Fine, Very Fine. Fine Sea Island was to have a silky quality with a cream colour.⁶⁹ These grades are noticeably similar in name to the terms used for Official Standards of American Uplands in the United States in the twenty-first century.⁷⁰ It is also clear that crops from certain islands were also named, for example St Simons. New Orleans was not regularly sub-graded, but occasionally it was noted as Ordinary, Middling, Fair and Fine.⁷¹ As the Prices Currents in Liverpool were constructed in part by news of the abundance and quality of the harvest in the Americas, correspondents on both sides of the Atlantic would have well understood these grades and sub grades.

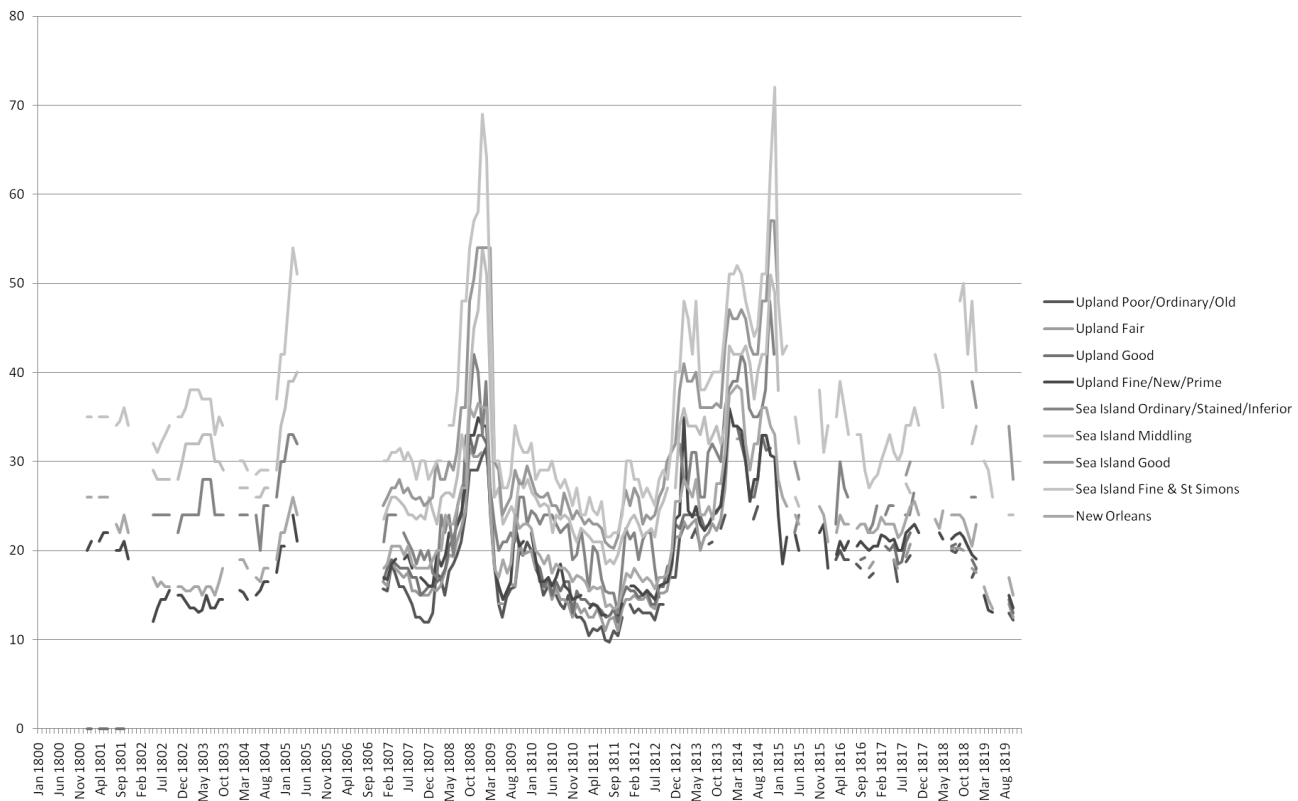
Not only were short and long-staple cottons used for coarse and fine yarns respectively, price was also determined by the grade of the various cottons composed of three factors, colour, foreign matter and character. These were important for determining the costs of production of the yarn to be produced. Yarn manufactured from higher-quality grades was cheaper to produce, partly because there was less foreign matter to extract.⁷² Depending on the price of the various grades of cotton and consumer demand for different types of textile, dealers and manufacturers would buy different types of raw cotton. For example, in 1808 Joseph Howell noted that ‘In Cottons we have a great stir; and should we not have arrivals from the Brazils, prices must be enormous.’⁷³ Labour costs would have also played a part. If labour costs were low, it might have been worth a manufacturer purchasing a lower grade of a particular type of cotton and paying more labour hours. Dealers and manufacturers were clearly aware of the different character of cottons, and some were already ‘branded’.

Price Variability and Uncertainty

Figure 1 clearly highlights the wide variability in price between 1800 and 1820. The uncertainty caused by this is also evidenced by the very fact that Liverpool dealers produced Prices Currents so regularly and so often.⁷⁴ Their abundance in the records suggests that they were often sent weekly, even across the ocean, and certainly at least monthly. Indeed, agents in Liverpool still sent Prices Currents to Providence throughout 1811, despite the fact that little trade was being conducted that year. In 1814, during the war, Hughes & Duncan noted that they were pleased to be able to write to their correspondents, ‘though circuitously’

(possibly via Amelia Island).⁷⁵ Not so many Prices Currents are extant in the JCB collection for 1814, but clearly due to the inability to send them, rather than the lack of willingness to do so. This would not have been worthwhile if there had not been so much uncertainty of which dealers felt they needed to keep their correspondents advised.

Figure 1: Raw Cotton Prices in Liverpool, 1800-1819, in pence per lb^a

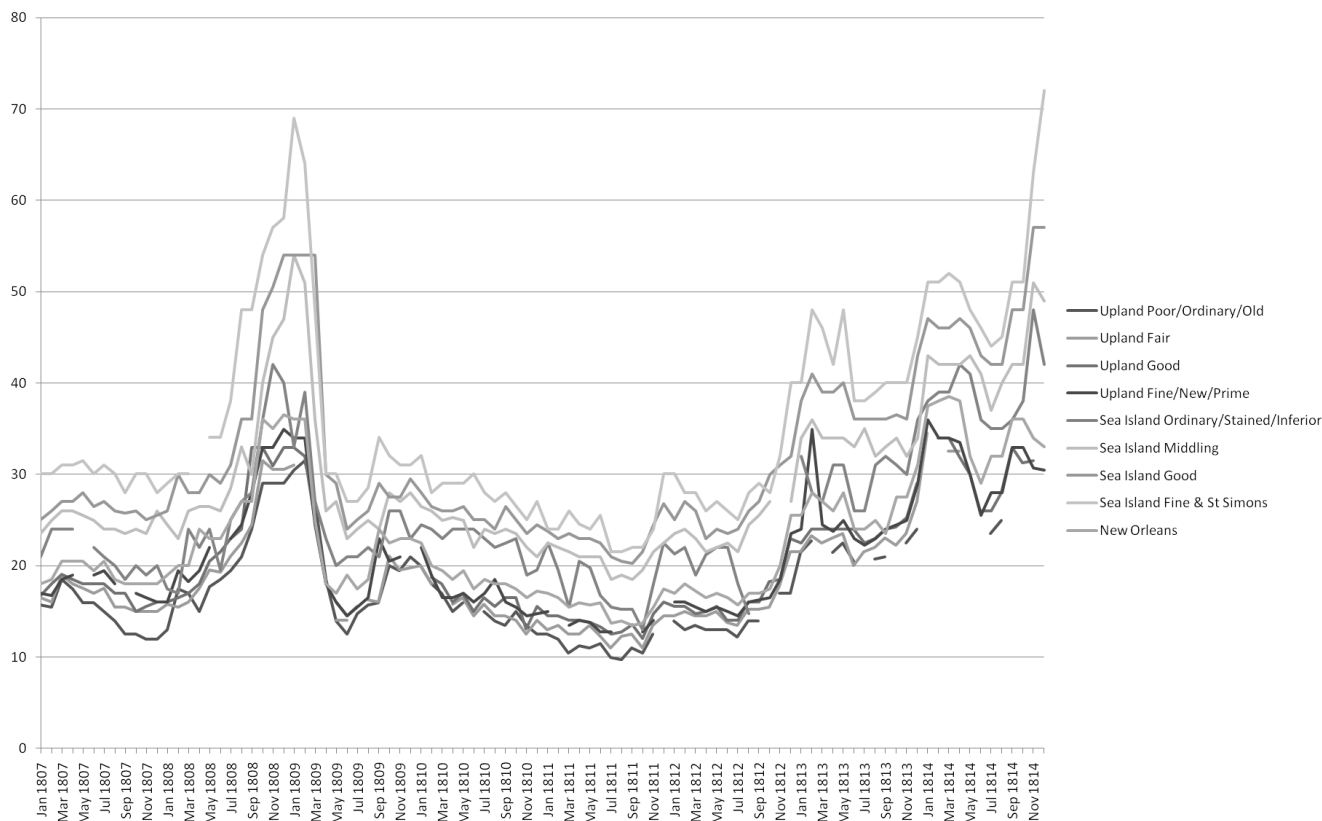


a. Author's database of raw cotton prices⁷⁶

Besides a brief spike in 1805, caused by the British Orders in Council of that year, prices were relatively stable 1800 to 1807, averaging about 16-18d per lb for New Orleans, 24d per lb for best Georgia Uplands, and 28-30d per lb for best Sea Island (the finest of which along with St Simons were the premium quality). Prices then fluctuated during the conflict running up to, and including, the Anglo-American War. They fell during 1815 and 1816 and stabilised somewhat, but remained higher than pre-war prices throughout the rest of the decade, with another high in late 1818.⁷⁷ Prices were generally lower overall during the period 1807-1814, but the Providence and Liverpool cotton merchants had to deal with the extra complication of the rise

in tension between their governments, and the resulting war.⁷⁸ Figure 2 outlines the prices of raw cotton in Liverpool during this period of tension, on which the remainder of this article will focus.

Figure 2: Raw Cotton Prices in Liverpool, 1807-14, in pence per lb^a



a. Author’s database of raw cotton prices

Despite the rising tensions of 1807, prices remained relatively stable. This was due to the expectations of the Liverpool market (see price discovery below). However, by 1808 prices began to rise, no doubt because news of the American Embargo, enacted 22nd December 1807 would have been received in Liverpool by then. The price of Fine Uplands rose from 16d in December 1807 to 19.5d by February 1808; much of which was attributed by the dealers to the activities of speculators rather than true demand.⁷⁹ In March the United States repealed the Embargo, but replaced it with the Non-Importation Act, pushing up the prices of all cottons. By September the best Sea Islands fetched 48d per lb, up from 30d in March, a rise of 62.5 per cent. In October, some very fine Sea Island, which was then scarce, reached 54d (an 80 per cent increase in total); prices of all American produce were described by Buchanan & Benn as ‘exorbitantly high’.⁸⁰

During 1809 prices started to rise again and reached another high in February; Fine Sea Islands reached a peak of 64d per lb (a rise of 113 per cent on March 1808). In March and April however, prices began to fall drastically, and continued to fall throughout the year, except for a brief recovery in October and November. Sea Islands reached a low of 27d per lb in June and July 1809, lower than in March 1807. Ordinary Uplands also fell to 12.5d (having reached a high of 31.5d per lb in February 1809), also lower than their March 1807 price of 18.5d per lb. The Rathbones put the reducing price down to large importations, which included a number of 'embargo breakers'.⁸¹

Rumours that the Non-Importation Act might be repealed (and normal supply restored) reduced prices still further.⁸² In late March news was received in Liverpool that the repeal of the Nonimportation Act would be carried into effect.⁸³ This anticipation of a reduced impediment to trade caused the price of all cottons to fall considerably, especially Fine Sea Islands, which fell to 30d per lb by the end of April. Apart from a brief and slight recovery in December 1809, prices continued to decline throughout 1809 and into 1810, due to expectations of a peaceful resolution. Indeed, the price of cottons started to fall again on most United States cottons in June once news had been received that the Non-Intercourse Act had at last been repealed (on 6 June 1810). William & Richard Rathbone addressed their correspondents with a 'feeling of pleasure proportioned to the state of anxiety and uncertainty' in which they had been previously.⁸⁴ The prices having fallen further, demand was up from the dealers, especially for Uplands (14.5d for Fair Uplands), and there had been many sales as the holders were happy to 'realize' at that price.⁸⁵ Prices rose slightly in July (15.75d for Fair Uplands), however, prices continued to fall during 1810 reaching a low in November, when Fair Uplands were 13d and Fine Sea Islands 25d per lb. William & Richard Rathbone attributed this continued fall to a spate of bankruptcies throughout the country in the autumn, which had 'excited a spirit of despondency'.⁸⁶

In January 1811 the Liverpool merchants were preoccupied with the Regency question and the British government's potential change in stance over the Orders in Council. Hughes & Duncan were still hopeful of the repeal of at least those of November 1807. In the mean time the markets remained dull because of the 'long continuance of commercial distress'.⁸⁷ Furthermore, a new Non-Importation Act was passed in the

United States on the 2nd February 1811, which prohibited the entry of any British goods.⁸⁸ This caused prices to fall to their lowest in July 1811, by which time Fine Sea Islands had fallen to 21.5d per lb, and New Orleans to 13.75d.⁸⁹ Ordinary Uplands fell to 9.75d per lb in August 1811. In October they were still low. Prices of Fine Sea Islands were 22d and Fine Uplands 12.75d. However, demand was more animated by early November, and prices increased slightly. This was due to the fact that both buyers and sellers thought that under the present political situation, supplies would diminish.⁹⁰

Following a brief recovery in December 1811 and January 1812, prices rose very slowly throughout that year. Much uncertainty remained amongst the Liverpool traders, and there was some short-term variability in price which is hidden in the monthly data presented here. For example, as various vessels arrived in Liverpool with news from the United States, demand altered accordingly, almost daily. When the *Lydia* arrived in February with news of the warlike resolutions of the House of Representatives, demand and prices rose. Then, when another vessel arrived a few days later with news that limited importations from Britain might be allowed, demand and prices subsided again. Further news in late February concerning the possibility of a change in the British administration reduced demand for American produce still further.⁹¹ Prices continued to fall into the summer, as those on the British side of the Atlantic were blissfully unaware that war had been declared on Britain by the United States on the 19th June 1812. Of course, when the news of the Declaration of War reached Liverpool on the 18th July, prices quickly rose on all American cottons, although not as much as previously.⁹² Rumours of Flags of Truce from the United States circulated and reduced prices for a few days in late August, but once the rumours were known to be without foundation, prices rose once again.⁹³ By late October the British government had passed an Order in Council granting Letters of Marque and Reprisal against the United States. The war was clearly going to be protracted, and this 'caused a lively demand for several articles of American produce', especially cotton.⁹⁴ By February 1813, Fine Sea Islands had reached 48d per lb, New Orleans 28d per lb and Ordinary Uplands 22.75d per lb. Prices were roughly the same in May, but by July American produce had 'been little enquired for'.⁹⁵ Prices fell during the remainder of the year.

During 1814 prices vacillated, but in November they rose sharply for most grades of American cotton. Ordinary uplands increased to 28.75d per lb from 23.5d in July, and Sea Islands reached a high of 63d per lb, having been 44d in July. Fine Sea Islands peaked at 72d per lb in December, the highest price reached for raw cotton in the period covered here.⁹⁶ Unfortunately there are no Prices Currents in the JCB collection on the reasons for this high, although Samuel Hope in Liverpool attributed it to a shortage of Sea Island stock.⁹⁷ Huge price variability was definitely present during this period.

Price Discovery

Prices were also ‘discovered’ in Liverpool at this time by a wide range of factors. These included: knowledge, perceived knowledge, rumour, past experience, expectations and hopes and fears. These factors both raised and lowered the price. In October 1807 Morrall & Borland reported that the political situation had not much affected the cotton market, because the ‘expectations’ of the Liverpool traders ‘did not lean to the idea of change’.⁹⁸ However, a month later Martin, Hope & Thornely noted that many dealers had been selling in order to be able to pay bills of exchange which Americans were drawing on them ‘in contemplation of a probable rupture’.⁹⁹ This particularly affected the prices of Uplands, but the prices of most American produce remained stable because many Liverpool merchants believed that the British government would resolve the Chesapeake affair to a peaceful conclusion. Indeed, in November, Morrall & Borland reported that very little apprehension remained, and despite a brisk speculative market in cotton, prices remained relatively stable.¹⁰⁰ Even the Orders in Council of November 1807 did not materially affect prices, although there was an increase in speculation.¹⁰¹ The expectations of the Liverpool merchants were constructing the price, keeping them lower than might be expected during a period of tension.

After this initial period of calm however, the Liverpool trading community became less complacent. By March 1808, the effects of the Embargo were being felt. Joseph Howell wrote that ‘The advance or decline of prices for American Produce much depends upon the continuation of the Embargo, should it be taken off, prices will materially decline tho’ the first arrivals, if sales are pushed, must pay tolerably well’[emphasis in original].¹⁰² Even a rumour that normal supplies were likely to be ‘renewed’ would cause the holders to be

anxious to realise [sell].¹⁰³ Hughes & Duncan commented that their prices were to be considered as nominal – the holders wishing to sell from the expectation of a partial repeal of the embargo – and the dealers being reluctant to buy for the same reason.¹⁰⁴ Clearly expectations that the conflict might be resolved was enough to reduce the price amongst the Liverpool cotton trading community, even if they remained uncertain.

However, their expectations were wrong. When news of the Non-Intercourse Act replacing the Embargo reached Liverpool on the 15th April it caused a ‘sudden and extraordinary shock, and alarm and anxiety were every-where apparent’.¹⁰⁵ The Erskine Treaty then opened trade between Britain and the United States on the 19th April, and in May the British government rescinded the Orders in Council of November and December 1807 and replaced them with a general blockade of France, Holland, Italy and their colonies and dependencies. This change in policy was also received with ‘surprise and astonishment’.¹⁰⁶ In fact, the Erskine Treaty was never ratified by the British Government, and Mr Jackson was sent to the United States instead.¹⁰⁷ In late May William & Richard Rathbone wrote that such rapid fluctuations in policy meant that it was difficult to give accurate quotations for prices.¹⁰⁸ The resumption of the Non-Intercourse Act (brought in as retaliation for the non ratification of the Erskine Treaty) caused a ‘general sensation in American Produce’, especially in Uplands, and prices rose again in September.¹⁰⁹ Sea Islands reached 34d per lb. Morrall & Borland noted that the recollection of the advance under the Embargo laws was pushing up prices more than the present situation warranted. Collective memory was clearly at work here.¹¹⁰

Rumours and expectations continued to help construct the price throughout 1810 as prices fell again, if not so dramatically as in 1809.¹¹¹ William & Richard Rathbone were able to report that whilst the continuance of the Non-Intercourse Law was important, its effects had been overrated because of embargo breakers, the use of neutral depots and circuitous routes such as via Amelia Island.¹¹² Rumours also abounded in the London newspapers that a new envoy might be sent to the United States to replace Mr Jackson, although this time a peaceful resolution was not deemed so likely.¹¹³ The autumn of 1810 was initially taken up with reports of the revocation of the Berlin and Milan Decrees and that France was then open to American commerce. This move by France was in expectation that Britain would revoke its Orders in Council, but William & Richard Rathbone clearly doubted this would happen.¹¹⁴ They wrote ‘if the Orders in Council

should continue to operate, and the blockading system remain in force, our relations, with your country [United States], may become the subject of renewed anxiety'.¹¹⁵ In contrast, Buchanan & Benn, the next day, attributed the decline in prices more forcefully to the recent failures of banking and mercantile houses in London as well as in Liverpool and other manufacturing towns.¹¹⁶ Buchanan & Benn were still ruminating on the extensive failures in October; they thought it would take some time for confidence to be completely restored.¹¹⁷

In early 1811 Hughes & Duncan complained of the 'accumulating burthens of a protracted war'.¹¹⁸ Despite this, there was still an oversupply of cotton. In contrast to the short-term rises and falls earlier in the political tension, the situation had gone on for so long, Hughes & Duncan now thought that peace, and/or a renunciation of the Orders in Council and the Embargo, would actually increase prices. William & Richard Rathbone pointed out the importance of political events in constructing the price. In November 1811 they noted that from past experience they did not expect the price to rise unless 'from the influence of some political event'.¹¹⁹ Indeed, a small recovery, which was mainly in cottons rather than all American produce, was sparked by a report of the United States Committee of Foreign Relations, which was pro-war.¹²⁰ In February 1812 Hughes & Duncan noted that 'The calamity of an American war seems now almost inevitable'.¹²¹ However, in March William & Richard Rathbone noted that politics had 'lost their influence upon public opinion'.¹²² Indeed, in early May, Hughes & Duncan reported on the declaration by the British government (dated 21st April) that if the Berlin and Milan decrees were repealed, the Orders in Council of 1807 and 1809 would be revoked. This information was met with indifference, no doubt because it was believed that neither event would occur and there was little change in the markets. However, in May, news was received that the Embargo had been re-imposed by the United States, which caused 'much disposition to purchase American produce'.¹²³ Despite a small check in the prices caused by the news of Mr Perceval's assassination, Hughes & Duncan were hoping that there would be a change in the British Government, and that 'those obnoxious acts', the Orders in Council, would be revoked'.¹²⁴ In fact, they were with effect from the 1st August, and the Liverpool mercantile community was hopeful that this would lead to the repeal of the Non-Importation Act in return.¹²⁵ Indeed, eighty to ninety vessels delayed their departure on this account, until news arrived on the *Lady Madison* that the bill proposing this had been withdrawn.¹²⁶ Even the

manufacturers were hopeful. In early July Hughes & Duncan reported that the manufacturers were so busy 'sending off goods already manufactured for the American market' that they were not purchasing cotton.¹²⁷ Prices continued to fall in July as those on the British side of the Atlantic were blissfully unaware that war had been declared on Britain by the United States on 19th June 1812. Of course, when the news of the Declaration of War reached Liverpool on the 18th July, prices quickly rose.¹²⁸ Rumours of Flags of Truce from the United States circulated and reduced prices for a few days in late August, but once they were known to be without foundation, prices rose once again.¹²⁹ In early October, Hughes & Duncan were still in a state of anxiety, and the market for American produce was generally stationary.¹³⁰

In January 1813 Hughes & Duncan could not 'divest ourselves of the hope, that the war will be of short duration'.¹³¹ In February 1813 they were still in reflective mood; they wrote that the combined effect of the President's message and the almost 'total annihilation' of the French Army in Russia, gave them hope the continental blockade might be ended.¹³² The British government was also considering opening up the East India trade and they thought this would mitigate some of the worse effects of the war.¹³³ However, by March the British government was still refusing to grant licences to import American cotton in neutral vessels and Fine Sea Islands reached 48d per lb.¹³⁴ Things might have been worse wrote Hughes & Duncan in February 1814, were it not for the fact that several neutral vessels had eluded the American Blockade and some Bourbons had seen sold at the East India Company sales; yet stocks of cotton were still 'unusually small' and 'diminishing rapidly'.¹³⁵ They also thought the high cotton prices would continue even on peace, because the pent-up demand was so high.¹³⁶ Indeed, they remained high even when news arrived that the Embargo and Non-Importation laws might be repealed, along with the repeal of the British restrictive measures regarding sending cotton via Amelia Island.¹³⁷ It is clear that rumours, hopes, fear, expectations and the previous experience of the mercantile community all helped construct the price of raw cotton in Liverpool during this period.

Forward Contracts

One last essential feature of a modern futures market is that the speculator can invest in a futures contract and own that contract, without ever owning the commodity or even having it in his possession. This did not appear to happen in the Liverpool cotton market in the period under discussion here. Both dealers and speculators normally had to purchase the cotton and either take on the storage costs involved or arrange for them to be paid via their purchase agreement. However, as noted above, forward contracts are part of a futures market and are very similar to futures contracts, although not regulated or standardised. Dumbell dates the existence of a market in ‘on arrival’ cotton by 1851 (in New York).¹³⁸ However, such contracts were clearly in existence Liverpool forty years earlier. Whilst it was not possible to locate any forward contracts *per se*, there is evidence of episodic bursts of this ‘highly-advanced form of trading’ during our period.¹³⁹

On 26th August 1809, Old Boweds were offered at 15.5d to 16d per lb, or 2600 bags new ‘on board’ at 16.75d or 17d per lb.¹⁴⁰ In early September, Old Boweds were again offered at varying prices; 16.5d for Fair, 16.75 for Middling and 16d for Good – whereas Good Old Boweds were offered for 16d ‘on board’. Sea Islands were also priced as ‘on board’ at 25d for Middling and 27d for Clean. Middling Sea Islands bought at public sale were quoted at 25.75d and 25d at the same time.¹⁴¹ On 20th January 1810, Uplands could be purchased at 20.25d per lb Middling, 22d for Prime, and 20d Fair ‘on board’, the statements in the papers having ‘produced an instantaneous and important impression’ on the market.¹⁴² In March 1810, Uplands (again) had been sold at 17.25d to 18.5 per lb, 16.5d to 17d ‘on board’ and ‘to arrive’ at 16.5d.¹⁴³

In 1812, George Holt was trading various lots of United States cotton in advance. In the same year, the brokers M. & J. Pool were also making sales many months before the cotton arrived in port.¹⁴⁴

Unfortunately, these practices were not reflected in the Prices Currents of 1812. However, another burst of these more nuanced quotations can be found in 1814. In January of that year Maranhams (from Brazil) were quoted between 34.5d to 38d per lb or 1200 bags ‘to arrive’ between 32.5d and 33d per lb; Bahias (also from Brazil) were listed at 35d to 37.5d or 105 bags ‘to arrive’ at 33d; at the same time Pernambucos were listed at 36d to 39.5d or ‘to arrive’ at 35d.¹⁴⁵ In early February, Bahias were listed at between 24d to 39d per lb, or ‘to arrive’ at 36.5d to 37d per lb (quality not given). At the same time Maranhans were quoted at between

32d and 37d per lb, or 37d 'to arrive' (quality not given), the rapidity of price fluctuations being 'almost without precedence'.¹⁴⁶ Later in February, Pernambucos (again from Brazil) were listed at 37.5d to 36d, whilst 700 bags 'on board' were priced at 36d to 36.5d.¹⁴⁷ In August, Boweds were listed at 25.5d 'to arrive' or 27d 'good on shore', perhaps because 'every person was anxiously waiting for information' on the negotiations with the United States.¹⁴⁸

However, 'to arrive' and 'on board' contracts were not only a feature of periods of tension and war. In January 1815 Maranhams were listed at between 29d and 29.5d, but 100 bags 'to arrive' were listed at 28d.¹⁴⁹ In February, 300 bags of Maranhams 'on board' were listed at between 23d and 25d, whilst the spot price was 25d to 25.5d.¹⁵⁰ There were also some instances of forward contracts towards the end of our wider period. In October 1817, 'fair and good fair' Maranhams were quoted at 25.5d, whilst 300 bags of the same 'to arrive' were 25d. A few months later, Pernambucos were listed at between 25d and 26d, or between 24.5d and 25d 'to arrive'.¹⁵¹ The last instance of forward trading found in the period under study was in July 1819, when good Maranhams were listed at 16d, or 'on board' at 15.5d.¹⁵²

Given that the quality of the goods 'on board' and 'to arrive' were not always given, it is difficult to make exact comparisons in terms of relative price. However, with regards to the 'on board' price it is possible that these differing costs reflect some sort of storage costs that was paid by the seller given that they generally seem to be a little higher. Storage costs usually make up some of the basis (the price between the spot price and the futures price). We do not know the time delay on the 'to arrive' listings (except for the M. & J. Pool example), but it seems that it is likely that some price differential was being given for those prepared to wait for their goods. The price was potentially lower in March 1810, depending on the quality, and in the later examples, was assuredly slightly less for 'to arrive' delivery. Conversely, in 1814 the 'to arrive' prices seem relatively high. Perhaps this was for a superior grade of cotton. Occasionally, the number of bags 'to arrive' were listed. This could mean that particular 'lots' were being sold, although as Williams says, the contract does not necessarily have to be linked to a particular 'lot' of goods, what is important is when the title to goods passes.¹⁵³

This issue of a 'lot' of bags might determine the quality to be expected. Given that, as noted above, the Prices Currents were based to a large extent on letters from the planters and factors in the United States, it is likely that the dealers in Liverpool were aware of the grades [quality] of cotton due to arrive on certain shipments. The dealers in Liverpool relied on their reputation to keep in business and so were unlikely to misrepresent the cotton for sale 'to arrive' or 'on board'.¹⁵⁴ If the cotton was not of the quality described, the dealer in Liverpool would have had to alter the price accordingly, and stern words would have been written to the correspondent on the other side of the Atlantic. Other ways of mitigating the issue of unseen quality is provided by M. & J. Pool. They linked the quality of their fifty bales of cotton to be delivered 'to be equal to sample in [sic] Campbell's hands'.¹⁵⁵ The same price alteration would have had to take place if on arrival, the cotton did not meet that quality. Furthermore, regular correspondence from ports in the United States would inform the Liverpool dealers of exactly when ships left port. Captains would also report having met with other vessels on the sea. Storms and other mishaps notwithstanding, the Liverpool dealers would have had a good idea of when vessels were due to arrive from which ports.

It is noteworthy that the 'to arrive' contracts in 1814 correspond with a price hike, exactly when hedgers would have wanted to protect themselves. Similarly, whilst in the 1809/10 instances, prices were not that high, the market was edgy due to the resumption of the Non-Intercourse Act, and increased speculation was noted, which would have pushed up prices further.¹⁵⁶ Prices were also all raised during the later examples during 1815-1819, so buyers were clearly using 'to arrive' contracts to hedge.

Conclusion

Concentrating on the participants and features of a modern futures market rather than a narrow definition has facilitated a more nuanced understanding of the raw cotton market in Liverpool in the early nineteenth century. Although not many of the dealers listed themselves specifically as cotton dealers or cotton brokers, it is clear that this was a developing and identifiable sub-category at this time. Manufacturers were also still purchasing directly from Liverpool dealers, despite the development of specialised brokers such as Nicholas Waterhouse. These dealers (hedgers) clearly identified themselves as a category apart from the speculators,

who were denigrated by them as high-risk takers who adversely altered the market. Those speculators, although unquantifiable, were clearly an important part of the Liverpool cotton market, both numerically, and in terms of ‘discovering’ or constructing, the price. Contemporary dealers may not have appreciated them, but they were important participants in an embryonic futures market in which dealers could hedge.

In terms of features, reliable and known grades were already in existence. Even if manufacturers would swap between grades on occasion, it is clear that they had preferred grades or ‘brands’ whose quality they knew and understood, such as Fine St Simons. There was also wide variability in price, not only over the whole period, but weekly and even daily. Ordinary Uplands varied between a low of 9.75d per lb in August 1811 and a high of 28.75d per lb in Nov 1814; New Orleans between 13.5d per lb in September 1811 and 38.5d per lb in March 1814; and Fine St Simons between 21.5d per lb in July 1811 and 72d per lb in December 1814. This variability worked in a symbiotic relationship with uncertainty. Price changes were caused by various uncertainties, which in turn caused the dealers anxiety which they tried to manage through hedging. Importantly, prices were clearly ‘discovered’ in Liverpool through shocks being mediated by its mercantile community. Shocks included political news such as Orders in Council, Non-Importation Acts, Embargoes and reports of battles and negotiations, but also Embargo breakers, blockades, rumours, financial failures and general economic depression. These shocks were all mediated over and above real supply and demand. Network memory, hopes, fears and expectations (whether realistic or not) all played an important role in discovering the price. There was also a time element in that there was a sense of ‘playing’ the market. Dealers might wait for speculators to reduce their price and the speculators might wait until increased demand had raised the price. Whilst there we have no physical evidence of futures contracts *per se*, there *is* evidence of forward trading and contracts, which are part of a modern futures market. Although clearly in episodic bursts, these more sophisticated price listings demonstrate that the Liverpool raw cotton market was already becoming far more nuanced. Importantly, it shows that the dealers were prepared to pay a different, if known price, for a secure delivery of cotton in the future. The fact that these bursts corresponded with a price hike suggests that indeed, hedging was already desirable and necessary in these periods.

This article does not argue that there was a modern futures market in Liverpool during the Anglo-American War. However, all the participants were already in existence, as were many of the features or functions, and earlier than previously identified. If we return to our definition of an embryonic futures market as

One which exhibits many (if not all) of the participants and features of a modern futures market, but which is in a rudimentary stage with potential for development

it is clear that an embryonic futures market in raw cotton existed in early nineteenth-century Liverpool. What was 'in a price' was already increasingly sophisticated. Surprisingly, cotton is often left out of the histories of futures markets, but this article suggests that it is worth investigating, not only cotton, but other commodities for evidence of similar embryonic futures markets in the early-nineteenth century.

WHAT'S IN A PRICE?

APPENDIX

A

Prices by Month by Cotton Type, Pence per lb. *

Cotton Type	Upland	Upland	Upland	Upland	Sea Island	Sea Island	Sea Island	Sea Island	New
	Ordinary	Fair	Good	Fine	Ordinary	Middling	Good	Fine & St Simons	Orleans
Jan 1800									
Feb 1800									
Mar 1800									
Apl 1800				22				34	23
May 1800									
Jun 1800									
Jul 1800				24				36	27.5
Aug 1800									
Sep 1800									
Oct 1800									
Nov 1800									
Dec 1800									
Jan 1801				20				35	26
Feb 1801				21				35	26
Mar 1801									
Apl 1801				21				35	26
May 1801				22				35	26
Jun 1801				22				35	26
Jul 1801									
Aug 1801				20				34	23
Sep 1801				20				34.5	22
Oct 1801				21				36	24
Nov 1801				19				34	22
Dec 1801									
Jan 1802				19				34.5	20
Feb 1802									
Mar 1802		15		19	24	30		33	19
Apl 1802									
May 1802				12	24	29		32	17
Jun 1802				13.5	24	28		31	16
Jul 1802				14.5	24	28		32	16.5
Aug 1802				14.5	24	28		33	16
Sep 1802				15.5	24	28		34	16
Oct 1802									
Nov 1802				15	22	28		35	16
Dec 1802				15	24	30		35	16
Jan 1803				14.25	24	32		36	15.5
Feb 1803				13.5	24	32		38	15.5
Mar 1803				13.5	24	32		38	16
Apl 1803				13	24	32		38	16

May 1803				13.25	28	33		37	15
Jun 1803				15	28	33		37	16
Jul 1803				13.5	28	33		37	16
Aug 1803				13.5	24	30		33	15
Sep 1803				14.5	24	30		35	16.5
Oct 1803				14.5	24	29		34	18
Nov 1803									
Dec 1803				15	24	27		30	20
Jan 1804									
Feb 1804				15.5	24	27		30	19
Mar 1804				15.25	24	27		30	19
Apl 1804				14.5	24	27		29	18
May 1804									
Jun 1804				15	24	26	28.5		17
Jul 1804				15.5	20	26	29		16.5
Aug 1804				16.5	25	27	29		18
Sep 1804				16.5	25	27	29		18
Oct 1804									
Nov 1804				17.5	26	29	37		19
Dec 1804				20.5	30	34	42		22
Jan 1805				20.5	30	36	42		22
Feb 1805					33	39	48		24
Mar 1805				24	33	39	54		26
Apl 1805				21	32	40	51		24
May 1805									
Jun 1805									
Jul 1805									
Aug 1805									
Sep 1805									
Oct 1805									
Nov 1805									
Dec 1805									
Jan 1806									
Feb 1806									
Mar 1806									
Apl 1806									
May 1806									
Jun 1806									
Jul 1806									
Aug 1806									
Sep 1806									
Oct 1806									
Nov 1806									
Dec 1806									
Jan 1807	15.75	16.5	16.75	17	21	23.5	25	30	18
Feb 1807	15.5	16	18	16.75	24	25	26	30	18.5
Mar 1807	18.5	19	19	18.5	24	26	27	31	20.5
Apl 1807	17.5	18	18.5	19	24	26	27	31	20.5
May 1807	16	17.5	18			25.5	28	31.5	20.5
Jun 1807	16	17	18	19	22	25	26.5	30	19.5
Jul 1807	15	17.5	18	19.5	21	24	27	31	20.5

Aug 1807	14	15.5	17	18	20	24	26	30	18.5
Sep 1807	12.5	15.5	17		18.5	23.5	25.75	28	18
Oct 1807	12.5	15	15	17	20	24	26	30	18
Nov 1807	12	15	15.5	16.5	19	23.5	25	30	18
Dec 1807	12	15	16	16	20	26	25.5	28	18
Jan 1808	13	15.75	16	16	17.5	24.5	26	29	19
Feb 1808	17.5	15.5	16.5	19.5	17	23	30	30	20
Mar 1808	17	16	17	18.25	24	26	28	30	20
Apl 1808	15	17.5	18	19.5	22	26.5	28		24
May 1808	17.75	19.5	20.5	22	24	26.5	30	34	23
Jun 1808	18.5	19.25	21.5		19.5	26	29	34	23
Jul 1808	19.5	21	23	23	25	28.5	31	38	25
Aug 1808	21	22.5	24	24.5	27	33	36	48	27
Sep 1808	24	24.5	33	28	28	30	36	48	27
Oct 1808	29	31.5	33	33	36	40	48	54	36
Nov 1808	29	30.5	31	33	42	45	50.5	57	35
Dec 1808	29	30.5	33	35	40	47	54	58	36.5
Jan 1809	30.5	31	33	34	33	54	54	69	36
Feb 1809	31.5		32	34	39	51	54	64	36
Mar 1809	27	24.5	25	24.5	27	36	54	48	25
Apl 1809	18.5			18	23	26	30	30	18
May 1809	14	14	16	16	20	27	29	30	17
Jun 1809	12.5	14	14.5	14.5	21	23	24	27	19
Jul 1809	14.75		15.5	15.5	21	24	25	27	17.5
Aug 1809	15.75	16.25		16.5	22	25	26	28.5	18.5
Sep 1809	16	16	23	23	21	24	29	34	24
Oct 1809	20	21		20.5	26	28	27.5	32	22.5
Nov 1809	19.5	19.5	20.5	21	26	27	27.5	31	23
Dec 1809	21	19.75			23	28	29.5	31	23
Jan 1810	20	20		22	24.5	26.5	28	32	22.5
Feb 1810	18	18	18.75	19	24	26	26.5	28	20
Mar 1810	17		18	16.5	23	25	26	29	19.5
Apl 1810	15	15.75	16	16.5	24	25.25	26	29	18.5
May 1810	16	16.5	17	17	24	25	26.5	29	19.5
Jun 1810		14.5	15	16	24	22	25	30	17.5
Jul 1810	15	15.75	16.5	17	23	24	25	28	18.5
Aug 1810	14	14.5	15.5	18.5	22	23.5	24	27	18
Sep 1810	13.5	14.5	16.5	16	22.5	24	26.5	28	18
Oct 1810	15	14	16.5	15.5	23	23.5	25	26.5	17.5
Nov 1810	13.5	12.5	13	14.5	19	22	23.5	25	16.5
Dec 1810	12.5	14	15.5	14.75	19.5	21	24.5	27	17.25
Jan 1811	12.5	13	14.5	15	22.5	22.5	23.75	24	17
Feb 1811	12	13.5	14.5		19.5	22	23	24	16.5
Mar 1811	10.5	12.5	14	13.5	15.5	21.5	23.5	26	15.5
Apl 1811	11.25	12.5	14	14	20.5	21	23	24.5	16
May 1811	11	13.5	13.75	13.75	19.75	21	23	24	15.75
Jun 1811	11.5	12.25	13.25	12.75	16.75	21	22.5	25.5	16
Jul 1811	10	11	12.5	12.75	15.5	18.5	21	21.5	13.75
Aug 1811	9.75	12.25	12.75		15.25	19	20.5	21.5	14
Sep 1811	11	12.5	13.5		15.25	18.5	20.25	22	13.5
Oct 1811	10.5	11	12	12.75	13	19.5	21.5	22	13.75

Nov 1811	12.5	13.5	14.75	14	18	21.5	24.5	24	15.5
Dec 1811		14.5	16		22.5	22.5	26.75	30	17.5
Jan 1812	14	14.5	15.5	16	21.3	23.5	25	30	17
Feb 1812	13	15	15.5	16	22	24	27	28	18
Mar 1812	13.5	14.5	14.75	15.5	19	23	26	28	17.25
Apl 1812	13	14.5	15	15	21.25	21.5	23	26	16.5
May 1812	13	15	15.5	15.5	22	22	24	27	17
Jun 1812	13	13.75	14	15	22	22.5	23.5	26	16.5
Jul 1812	12.25	13.5	14	14.5	18	21.5	24	25	15.75
Aug 1812	14	15.25	16	16	14.75	24.5	26	28	17
Sep 1812	14	15.25	16	16.25		25.5	27	29	17
Oct 1812		15.5	18.25	16.5		27	30	28	17.5
Nov 1812	17	17.75	18.5	18.5	19.5		31	32	20
Dec 1812	17	21.5	23	23.5		27	32	40	25.5
Jan 1813	21.5	21.5	22.5	24	32	34	38	40	25.5
Feb 1813	22.75	23.25	24	35	28	36	41	48	28
Mar 1813		22.5	24	24.5	27	34	39	46	27
Apl 1813	21.5	23	24	23.75	31	34	39	42	26
May 1813	22.5	23.5	24	25	31	34	40	48	28
Jun 1813	20.5	20	24	23	26	33	36	38	24
Jul 1813		21.5	22.5	22.25	26	35	36	38	24
Aug 1813	20.75	22	23	23	31	32	36	39	25
Sep 1813	21	23	24	24	32	33	36	40	23.5
Oct 1813		22.25	24.25	24.5	31	34	36.5	40	27.5
Nov 1813	22.5	23.5	25.25	25	30	32	36	40	27.5
Dec 1813	24	27	29	29	36	34	43	45	31
Jan 1814		34.5		36	38	43	47	51	37.5
Feb 1814			34	34	39	42	46	51	38
Mar 1814		32.5	34	34	39	42	46	52	38.5
Apl 1814		32.5	32	33.5	42	42	47	51	38
May 1814			30	30	41	43	46	48	32
Jun 1814			26	25.5	36	41	43	46	29
Jul 1814	23.5	23.5	26	28	35	37	42	44	32
Aug 1814	25		28	28	35	40	42	45	32
Sep 1814			33	33	36	42	48	51	36
Oct 1814			31.25	33	38	42	48	51	36
Nov 1814	28.75		31.5	30.75	48	51	57	63	34
Dec 1814				30.5	42	49	57	72	33
Jan 1815	22			24		38	48	48	28
Feb 1815				18.5				42	26
Mar 1815	20	21	21	21.5	30	36	39	43	25
Apl 1815									
May 1815				21.75	22	26	30	35	24
Jun 1815				20	24	25	28	32	23
Jul 1815									
Aug 1815									
Sep 1815	21.5			24		33		43	27.5
Oct 1815									
Nov 1815				22	30	31	34	38	25
Dec 1815				23				31	24
Jan 1816	17	16	17	18	23	26	29	34	21

Feb 1816									
Mar 1816	19	17	18.5	19.5	23	26	30.5	35	22
Apl 1816	20			21	30			39	24
May 1816	19			20	27			36	23
Jun 1816	19	19.25	20.5	21	26	28	30	33	23
Jul 1816									
Aug 1816	18.5			20.5	24			33	22.5
Sep 1816	18		19	21				33	23
Oct 1816			19.25	20.5	23			29	23
Nov 1816	17	18		20	22	21		27	22
Dec 1816	17.5	18.75	19.25	20.5	23			28	22
Jan 1817				20.5	25		25.5	28.5	22.5
Feb 1817				21.75				30	23.75
Mar 1817		20.25	20.5	21.5	24	26	29	31.5	23
Apl 1817			20	21	25			33	23
May 1817	19	19	20.75	21.25	25	26	27	31	23
Jun 1817	16.5	18	18.5	20				30	21.5
Jul 1817			18.75	20				31	22
Aug 1817	18.75	19.25	21	22	24	27.5	28.5	34	23.5
Sep 1817	19.5	20.75	22	22.5	24	26.5	30	34	25
Oct 1817				23	26.5			36	25.5
Nov 1817				22				34	24
Dec 1817									
Jan 1818	18.5			22				36	24
Feb 1818									
Mar 1818			21.5			31	35	42	23.5
Apl 1818				22				40	22.5
May 1818	20		20.5	21.25				36	24.5
Jun 1818									
Jul 1818	20	20.25	20.5	21.25		45		48	24
Aug 1818	19.75	20.25	20.75	21.75					24
Sep 1818	20.75	20.25		22		37		48	24
Oct 1818		20		21.5	28			50	23.5
Nov 1818				20.5				42	22
Dec 1818	17	18	19	19.5	26	32	39	48	20.5
Jan 1819	18	17.5	18	19	26	34	36	40	23
Feb 1819									
Mar 1819	14.5			15				30	16
Apl 1819				13.25				29	14.5
May 1819				13				26	13.5
Jun 1819									
Jul 1819	11.25	12	13	14	24	26	26	32	14
Aug 1819									
Sep 1819	13	14	14.5	15		24	34	42	17
Oct 1819	12.25	12.5	13	13.5		24	28		15
Nov 1819									
Dec 1819			13.5				26		14.75

* Bold denotes prices taken from Liverpool Cotton Association, Liverpool Record Office

Source: Author's Database

¹ Riello, *Cotton*. Like Riello, this article is more concerned with the process of price construction than the measurable outcome, p. 4. See also Beckert, *Empire of Cotton: A New History of Cotton*, who gives Liverpool surprisingly little coverage.

² Esteban, “British Textile Prices”; Harley and Crafts, “Cotton Textiles and Industrial Output Growth”; Harley, “Cotton Textile Prices”; Esteban, “Factory Costs, Market Prices, and Indian Calicoes”; Harley, “Cotton Textile Prices Revisited”; Broadberry and Gupta, “Lancashire, India, and Shifting Competitive Advantage”.

³ Temin, “The Causes of Cotton-Price Fluctuations” p.463.

⁴ Dumbell, “Early Liverpool Cotton Imports”; Dumbell, “The Beginnings of the Liverpool Cotton Trade”; Hyde, Parkinson and Marriner, “The Cotton Broker and the Rise of the Liverpool Cotton Market”. This is also true of the leading books on the cotton trade. Ellison, *The Cotton Trade of Great Britain*, and Wadsworth and de L. Mann, *The Cotton Trade and Industrial Lancashire*.

⁵ McCusker, “The Demise of Distance”, p.308. Printed Prices Currents were just one form of a variety of business press. See also McCusker, “European Bills of Entry”.

⁶ See that of Grenada for 1785 at CO 101/26/60, f.409, TNA. Interestingly, George Marsden, seemingly McConnell & Kennedy of Manchester’s main provider of raw cotton, persisted in using hand written Prices Current as late as 1812, even when giving almost weekly updates. McConnell & Kennedy correspondence, GB133, MCK 2/1/17 and MCK 2/1/18, John Rylands Library, Manchester, UK.

⁷ Prix Courant General, Dec 1812, E219/629, TNA; Price Current, Antwerp, Sep 1814, GB133, MCK 2/1/20/7, John Rylands Library.

⁸ See Prices Current for Nassau Apl 1786 at CO 23/25/42; for Kingston, Jun and Jul 1805 at CO 137/114/51 ff.159, 174; for Barbados Oct 1805 at CO 28/73/1, f.96; for Grenada Sep 1786 at CO/101/26, f.409 all TNA.

⁹ On Samuel G. Arnold’s father see Coyle, *Welcome Arnold*. For Brown & Ives see Hedges, *The Browns of Providence Plantation*. Please note that at the time of transcription [May 2014] the Prices Current portion of this collection was still being processed, and may be catalogued differently in future.

¹⁰ Prices were also taken from the Liverpool Cotton Association collection (380 COT, Liverpool Record Office), where not available in the JCB collection 1807-1814. Note that these were all produced by one person, Samuel Hope, and quote cotton prices only, so do they not give the range and breadth of opinion of those at the JCB.

¹¹ Schoen, *Fragile Fabric*, p.41. For exports by state see Bruchey, *Growth of the American Economy*. Others such as Tennessees were also listed in the Prices Current. *G. Barbadosense* is a New World cotton indigenous to South America. Short staple cottons come from both the Old World (*G. Arboreum* and *G. Herbaceum*) and the New World (*G. Hirsutum*). Lakwete, *Inventing the Cotton Gin*, p.2.

¹² Hull, *Fundamentals of Futures and Options Markets*, p.4.

¹³ Carter, *Options and Futures Markets*, pp.83, 85.

¹⁴ Williams, “The Origins of Futures Markets”, *passim*. He also omitted an active forward contracts market in wool between England and Southern Europe in the late thirteenth and early fourteenth centuries. Bell et al, *The English Wool Market*. Advance contracts were commonly used in the wool trade, see Bell et al, *Advance Contracts for Wool*.

¹⁵ Williams, “Liverpool Merchants and the Cotton Trade”, p.19.

¹⁶ Bernstein argues that these rules constitute a Private Legal System. Bernstein, “Private Commercial Law in the Cotton Industry”; Williams, “The Origins of Futures Markets”, p.306. See the Liverpool Cotton Association rules of 1871 at 380 COT 1/1/1 at LRO.

¹⁷ Beckert, *Empire of Cotton*, p.212. See also Hall, “The Liverpool Cotton Market, *passim*.”

¹⁸ Hull, *Fundamentals of Futures and Options Markets*, p. 1; Telser, “Why There Are Organised Futures Markets”, pp.1, 11; Carter, *Futures and Options Markets*, p. 3; Howell, “Quality-Price Differentials”, p.30.

¹⁹ Williams, “Origins of Futures Markets”, p.307.

²⁰ Carter, *Futures and Options Markets*, pp.4-6; Hull, *Fundamentals of Futures and Options Markets*, p.575.

²¹ Williams, “The Origins of Futures Markets”, p.308.

²² Carter, *Futures and Options Markets*, p.4.

²³ Character is based on indefinable characteristics such as soil, climate, water supply and seed stocks. Cox, “Relation of the Price and Quality of Cotton”.

²⁴ See <http://www.cottoninc.com/fiber/quality/Classification-Of-Cotton/Maintaining-Official-Standards-Classification/> accessed 8 Nov 2017.

²⁵ Cox, “Relation of the Price and Quality of Cotton”. See also Howell, “Quality Price Differentials in Cotton Marketing”.

²⁶ Vaillant et al, “Futures Markets of Agricultural Commodities”, Abstract.

²⁷ Carter, *Futures and Options Markets*, p.19.

²⁸ Carter, *Futures and Options Markets*, pp.83-85. Where the price for contracts with long delivery is lower for those on shorter delivery, the market is said to be inverted. This can happen where there is a relatively low carry over of stocks, where there is a shortage of stocks to be delivered, or where there is a shortage of speculators willing to hold long futures positions, pp.40, 91.

²⁹ Carter, *Futures and Options Markets*, p.3.

³⁰ Williams, “The Origins of Futures Markets”, p.310.

³¹ It is possible to argue that the Exchange Flags, where the cotton brokers were known to deal counts as a formal site, but there were no written rules and regulations at this time, and formal contracts cannot be proved.

³² Based on the definition of embryonic in Stephenson, *Oxford English Dictionary*.

³³ Schoen, *Fragile Fabric*, pp.45, 48-49.

³⁴ Dumbell, “Early Liverpool Cotton Imports”, p.362.

³⁵ Ellison, *Cotton Trade*, pp.83-84.

³⁶ A bale of cotton yarn was 3-4 Cwt (136.077 (300lbs) -181.436kg (400)), Zupco, *A Dictionary*, p.12. He does not list the weight for bags or bales of raw cotton, although Ellison lists them as 400lbs, *Cotton Trade*, p.85. The average bale size for raw cotton in the US today is 495 lbs.

<http://www.cottoninc.com/fiber/quality/US-Fiber-Chart/Bale-Size/index.cfm> accessed 20 Jan 2017.

³⁷ Ellison, *Cotton Trade*, pp.85-86.

³⁸ Schoen, *Fragile Fabric* p.49.

³⁹ Catling, *The Spinning Mule*, chapter one.

⁴⁰ Lakwete, *Inventing the Cotton Gin*, p 32.

⁴¹ Catling, *The Spinning Mule*, chapter three.

⁴² Lakwete, *Inventing the Cotton Gin*, p.33.

⁴³ Lakwete's fascinating business history demonstrates that the rather scholarly Whitney was unlikely to have been the saw gin's real inventor. She argues that he and his financial backer and later partner, Phineas Miller, probably got the patent through 'duplicity masked by prestige' having stolen the ideas from local artisans. Lakwete, *Inventing the Cotton Gin*, p.55.

⁴⁴ Howell, "Quality Price Differentials in Cotton Marketing", p.330. *Babardense*, (of which Sea Island is an example) a long-staple cotton, continued to be cleaned using the ancient foot-powered roller gin. Lakwete, *Inventing the Cotton Gin*, p.150.

⁴⁵ See Schoen, *Fragile Fabric*, pp.39-51 on the early growth of the cotton trade between the United States and Great Britain.

⁴⁶ On the causes of the French Wars see Rothenburg, "The Origins, Causes, and Extension of the Wars".

⁴⁷ Schoen, *Fragile Fabric*, p.69. See also Crouzet, "The Impact of the French Wars, p.190.

⁴⁸ Matters were brought to a head when the British frigate *Leopard* fired on, and then boarded, the USS *Chesapeake* on 22 June 1807 allegedly in order to retrieve deserters. Great Britain captured 917 American ships between 1803 and 1812. Silverstone, *Divided Union*, pp.71–75.

⁴⁹ Daniels, "American Cotton Trade". See also Frankel, "The 1807-1809 Embargo Against Britain". The Americans, and especially the south, suffered badly from the various Embargoes. Schoen, *Fragile Fabric*, chapter two.

⁵⁰ This facilitated trust and enabled trade to commence quickly once legal again. Haggerty, *'Merely for Money'?*, chapter "Trust", pp.66-96.

⁵¹ References are to the Brown Family Business Papers unless otherwise noted.

⁵² *Gore's Directory*, 1805; These included three women.

Haggerty, *The British-Atlantic Trading Community*, p.7.

⁵³ Prices Current, 2 Mar 1811, Hughes & Duncan.

⁵⁴ Nicholas Waterhouse Ledger, LUL MS 138, ff.569, 581, Sydney Jones Library.

⁵⁵ Andrew, *Aristocratic Vice*, chapter five. For criticism of stock jobbing see Bowen, “The Pests of Human Society”. Investments in the markets as part of a broader portfolio was not criticised however. Hancock, “Domestic Bubbling”.

⁵⁶ Prices Current, 26 Aug 1809, Samuel Hope.

⁵⁷ Prices Current, Morrall & Borland, 19 Sep 1809.

⁵⁸ Prices Current, 12 Jan 1813, William & Richard Rathbone.

⁵⁹ Prices Current, 12 Feb 1808, Joseph Howell, Arnold Family Business Papers, Prices Currents (hereafter AFBPPC).

⁶⁰ Prices Current, 20 Oct 1808, Buchanan & Benn.

⁶¹ Prices Current, 9 Mar 1810, Conway & Davidson.

⁶² Haggerty, “Risk and Risk Management”.

⁶³ Dumbell, “Early Liverpool Cotton Imports”, p.365.

⁶⁴ Seven brokers were female. Haggerty, *British-Atlantic Trading Community*, p.82. The eight were George Marsden, William Peers, James Stock, James Yates, Theophilus Lewthwaite, Samuel Hope, James and John Greaves. *Gore’s Directory*, 1805.

⁶⁵ See GB133 MCK 2/1/17 & 18.

⁶⁶ Nicholas Waterhouse Ledger, LUL MS 138, Special Collections and Manuscripts, Sydney Jones Library.

⁶⁷ See for example, Prices Current, Rathbone, Hughes & Duncan, 13 Jul 1804; Prices Current, Morrall & Borland, 19 Jan 1807, both AFBPPC.

⁶⁸ See for example, Prices Current, Samuel Hope, 18 Feb 1815.

⁶⁹ Prices Current, Morrall & Borland, 14 Oct 1810.

⁷⁰ See <http://www.cottoninc.com/fiber/quality/US-Fiber-Chart/US-Cotton-Standards/>, accessed 8 Nov 2017.

⁷¹ Prices Current, Buchanan & Benn, 14 Nov 1810.

⁷² Howell, “Quality-Price Differentials,” pp.329-330.

⁷³ Prices Current, 20 Sep 1808, Joseph Howell, AFBPPC. Cotton from Brazil was the main replacement for cotton from the United States during this period. Davis, *The Industrial Revolution*, p.40.

⁷⁴ The trend shown is remarkably similar to Marwade's, although because his prices were based only on Prime Uplands he misses the spike in early 1805 in Fine Sea Islands (see graph at front). Chr. G. Marwarde, *Commercial and Political Observations on the State of the Cotton Market; Shewing [sic] Its Various Fluctuations in Price, from the Treaty of Amiens, in the Year 1801, to the Present Time* (Liverpool: Printed by J. Lang, 1811). These prices are also broadly in line with Mitchell and Deane, although the Prices Currents from Liverpool often only list Upland Prime/Fine which are usually slightly higher than those listed by Mitchell and Deane, *Abstract of British Historical Statistics*, p.496.

⁷⁵ Prices Current, 23 Feb 1814, Hughes & Duncan. See the reporting of cotton coming in via Amelia Island at Prices Current, Samuel Hope, 22 Oct 1814; 29 Oct 1814.

⁷⁶ Note that usually only one price was given for New Orleans. The full list of prices can be found at Appendix A.

⁷⁷ This appears to have been due to real demand from the manufacturers, although some Liverpool merchants commented that the market was rather dull due to high imports during 1818. Prices Current, Buchanan, Smith & Co., 1 Jan 1819; Prices Current, Thomas and John D. Thornely, 23 Jan 1819.

⁷⁸ The Berlin Decrees, Orders in Council and the American Embargo all disrupted exports and emphasised wartime distress, and in 1803 and 1808 particularly. Harley, "Cotton Textile Prices", pp.63-64.

⁷⁹ Prices Current, 12 Feb 1808, Joseph Howell, AFBPPC.

⁸⁰ Prices Current, 20 Oct 1808, Buchanan & Benn..

⁸¹ Prices Current, William & Richard Rathbone, 27 Mar 1809. Contemporaries did not always distinguish between the Embargo, the Non-Importation and Non-Intercourse Acts. James Maury, the American Consul reported that 6,000 bales of cotton had been smuggled in during December 1808 and January 1809. Schoen, *Fragile Fabric*, p.80.

⁸² Prices Current, 27 Mar 1809, William & Richard Rathbone.

⁸³ Prices Current, 1 Apr 1809, William & Richard Rathbone.

⁸⁴ Prices Current, 16 Jun 1810, William & Richard Rathbone.

⁸⁵ Prices Current, 16 Jun 1810, William & Richard Rathbone. On realised versus quoted prices see Çalişkan, *Market Threads*, pp.23-24.

-
- ⁸⁶ Prices Current, 9 Nov 1810, William & Richard Rathbone.
- ⁸⁷ Prices Current, 5 Jan 1811, Hughes & Duncan.
- ⁸⁸ Daniels, “American Cotton Trade”, p.278.
- ⁸⁹ New Orleans reached their low in September 1811 at 13.5 per lb.
- ⁹⁰ Prices Current, 8 Nov 1811, William & Richard Rathbone. Their Prices Current of 24 Oct 1811 clearly lays out the regulations for importing the produce of the United States.
- ⁹¹ Prices Current, 22 Feb 1812, Daniel Buchanan, AFBPPC. Much of this fluctuation is hidden in the database because the prices are recorded monthly.
- ⁹² Prices Current, 25 Jul 1812, Hughes & Duncan. Hughes & Duncan noted a slight fall after the initial response, but the trend for the remainder of the year was up.
- ⁹³ Prices Current, 29 Aug 1812, Hughes & Duncan.
- ⁹⁴ Prices Current, Liverpool, 20 Oct 1812, Hughes & Duncan.
- ⁹⁵ Prices Current, 17 Jul 1813, Hughes & Duncan.
- ⁹⁶ Prices Current, 3 Dec 1814, Samuel Hope.
- ⁹⁷ Prices Current, 19 Nov 1814, Samuel Hope.
- ⁹⁸ Prices Current, 10 Oct 1807; 24 Oct 1807, Morrall & Borland
- ⁹⁹ Prices Current, 13 Oct 1807, Martin, Hope & Thornely.
- ¹⁰⁰ Prices Current, 14 Nov 1807, Morrall & Borland.
- ¹⁰¹ In response to Napoleon’s Continental System these Orders in Council required American Vessels to stop in British Ports before travelling to French-held ports, to have a special license for cotton, and pay an export tax of 9d per lb. Schoen, *Fragile Fabric*, p.74.
- ¹⁰² Prices Current, 13 Mar 1808, Joseph Howell, AFBPPC.
- ¹⁰³ Buchanan & Benn say Embargo, but in fact that had been removed and replaced with the Non-Importation Act in March 1809. Daniels, “Cotton Trade”, p.278.
- ¹⁰⁴ Prices Current, 29 Apr 1809, Hughes & Duncan. In the early part of the month a rumour had briefly prevailed that Congress had not passed the repeal and that had briefly pushed up prices.

-
- ¹⁰⁵ Prices Current, 19 Apl 1809, William & Richard Rathbone. Concerns were raised about the Non-Importation Act as it was believed it needed careful management, that many ports in Europe were not neutral and that it might cause more problems than it solved. See for example, Prices Current, 19 Apl 1809, Martin, Hope & Thornely.
- ¹⁰⁶ Prices Current, 1 May 1809, Hughes & Duncan; Prices Current, 2 May 1809, William & Richard Rathbone. A copy of the Orders in Council rescinding the previous Orders can be found here.
- ¹⁰⁷ Prices Current, 17 Jun 1809, Morrall & Borland.
- ¹⁰⁸ The British government argued that he had overstepped his authority. Prices Current, 29 May 1809, William & Richard Rathbone.
- ¹⁰⁹ Prices Current, 9 Sep 1809, Morrall & Borland..
- ¹¹⁰ On collective memory in networks see Hancock, “The Trouble with Networks”.
- ¹¹¹ Prices Current, 16 Jun 1810, William & Richard Rathbone.
- ¹¹² On neutral depots see Schoen, *Fragile Fabric*, p.85. Amelia Island is just off the coast of Florida and then in Spanish hands, and so was officially neutral. See War, “The Commerce of East Florida”.
- ¹¹³ Slauter argues that speculation on politics in the press was as prevalent as speculation on stocks by the late eighteenth century. Slauter, “Forward-Looking Statements”.
- ¹¹⁴ This did not occur until June 1812.
- ¹¹⁵ Prices Current, 22 Aug 1810, William & Richard Rathbone.
- ¹¹⁶ Prices Current, 23 Aug 1810, Buchanan & Benn.
- ¹¹⁷ Prices Current, 13 Oct 1810, Buchanan & Benn.
- ¹¹⁸ Referring to the Napoleonic Wars. Prices Current, 2 Mar 1811, Hughes & Duncan.
- ¹¹⁹ Prices Current, 8 Nov 1811, William & Richard Rathbone.
- ¹²⁰ Schoen, *Fragile Fabric*, pp.88-89.
- ¹²¹ Prices Current, 21 Feb 1812, Hughes & Duncan.
- ¹²² Prices Current, 14 Mar 1812, William & Richard Rathbone. (There were no Prices Current for Apl 1812 in the JCB).
- ¹²³ Prices Current, 30 May 1812, Hughes & Duncan.

-
- ¹²⁴ Prices Current, 30 May 1812, Hughes & Duncan. Hughes & Duncan thought a coalition might occur, but that if Lord Wellesley and Mr Canning were those added to the government, its stance would not change. Spencer Perceval was Prime Minister when he was assassinated on 11 May 1812 by a merchant, John Bellingham. Jupp, “Spencer Perceval”.
- ¹²⁵ Prices Current, 25 Jun 1812, Hughes & Duncan.
- ¹²⁶ Prices Current, 30 May 1812, 25 Jun 1812.
- ¹²⁷ Prices Current, 4 Jul 1812, Hughes & Duncan.
- ¹²⁸ Prices Current, 25 Jul 1812, Hughes & Duncan. Hughes & Duncan noted a slight fall after the initial response, but the trend for the remainder of the year was up.
- ¹²⁹ Prices Current, 29 Aug 1812, Hughes & Duncan.
- ¹³⁰ Prices Current, 5 Oct 1812, Hughes & Duncan.
- ¹³¹ Prices Current, 9 Jan 1813, Hughes & Duncan.
- ¹³² Prices Current, 1 Feb 1813, Hughes & Duncan.
- ¹³³ The EIC lost its monopoly of the India Trade in 1813. Bowen, *The Business of Empire*, pp.42-43.
- ¹³⁴ Prices Current, 1 Mar 1813, Hughes & Duncan.
- ¹³⁵ Prices Current, 23 Feb 1814, Hughes & Duncan.
- ¹³⁶ Figure 1 demonstrates that cotton prices in fact did remain relatively high after 1814, if checked slightly. They did not expect other American produce to keep their high prices however.
- ¹³⁷ Presumably they hoped that the British government would start issuing licences for neutral vessels once again. Making Florida part of the United States became a war aim for the Americans. See Silverstone, *Divided Union*, pp.106-114.
- ¹³⁸ Dumbell, “The Origin of Cotton Futures”, p.259. These contracts were routine in Liverpool by 1871. See Liverpool Cotton Brokers Association Regulations, p.12.
- ¹³⁹ Williams, “The Origins of Futures Markets”, p.309.
- ¹⁴⁰ Prices Current, 26 Aug 1809, Samuel Hope.
- ¹⁴¹ Prices Current, 2 Sep 1809, Samuel Hope.
- ¹⁴² Prices Current, 20 Jan 1810, Samuel Hope

-
- ¹⁴³ Prices Current, 3 Mar 1810, Samuel Hope.
- ¹⁴⁴ Hall, 'The Liverpool Cotton Market, p.102.
- ¹⁴⁵ George Marsden to McConnell & Kennedy, 28 Jan 1814, MCK/21/20/6.
- ¹⁴⁶ Prices Current, 5 Feb 1814, Samuel Hope.
- ¹⁴⁷ George Marsden to McConnell & Kennedy, 26 Feb 1814, MCK/21/20/6.
- ¹⁴⁸ Prices Current, 20 Aug 1814, Samuel Hope.
- ¹⁴⁹ Prices Current, Ewart & Rutson, 14 Jan 1815, Liverpool Cotton Association, 380 COT 1/11/4.
- ¹⁵⁰ Prices Current, Ewart & Rutson, 25 Feb 1815, Liverpool Cotton Association, 380 COT 1/11/4.
- ¹⁵¹ Prices Current, Samuel Hope, 14 Feb 1818.
- ¹⁵² Prices Current, Samuel Hope, 3 Jul 1819.
- ¹⁵³ Williams, "Origins of Futures Markets", pp.310-11.
- ¹⁵⁴ Haggerty, *'Merely for Money'?*, chapter "Reputation", pp.97-131.
- ¹⁵⁵ Cited in Hall, *The Liverpool Cotton Market*, p.102.
- ¹⁵⁶ Prices Current, 9 Sep 1809, Morrall & Borland. Dixon, Lavater & Co. noted increased speculation to a dangerous level. Prices Current, 14 Oct 1809, AFBPPC.

BIBLIOGRAPHY

Beckert, Sven, *Empire of Cotton: A New History of Global Capitalism*. London: Penguin Random House, 2014.

Bell, Adrian R., Chris Brooks and Paul R. Dryburgh, *The English Wool Market, c.1230-1327*. Cambridge: Cambridge University Press, 2007.

Bell, Adrian R., Chris Brooks and Paul R. Dryburgh, *Advance Contracts for the Sale of Wool c.1200-1327*. List and Index Society, Vol. 315, 2006.

Bernstein, Lisa, “Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms and Institutions”, *Michigan Law Review*, 99, No. 1724 (2001), 1724-1790.

Bowen, Huw V., “‘The Pests of Human Society’: Stockbrokers, Jobbers and Speculators in Mid-Eighteenth Century Britain”, *History*, 78, No. 252 (Feb 1993), 38-53.

Bowen, Huw V., *The Business of Empire: The East India Company and Imperial Britain, 1756-1833*. Cambridge: Cambridge University Press, 2006.

Broadberry, Stephen, and Bishnupriya Gupta, “Lancashire, India, and Shifting Competitive Advantage in Cotton Textiles. 1700-1850: The Neglected Role of Factor Prices”, *Economic History Review*, 62, No. 2 (2009), 279-305.

Bruchey, Stuart, *Cotton and the Growth of the American Economy: 1790-1860, Sources and Readings*. New York: Harcourt, Brace & World Inc., 1967.

Çalışkan, Koray, *Market Threads: How Cotton Farmers and Traders Create a Global Commodity*. Princeton: Princeton University Press, 2010.

Carter, Colin A., *Futures and Options Markets: An Introduction*. Long Gorge, IL: Waveland Press Inc., 2003.

Catling, Harold, *The Spinning Mule*. Newton Abott: David & Charles, 1970.

Cox, Alonzo B., “Relation of the Price and Quality of Cotton”, *Journal of Farm Economics*, 11, No. 4 (Oct 1929), 542-49.

Coyle, Franklin Stuart, *Welcome Arnold (1745-1798): Providence Merchant: The Founding of an Enterprise*. Unpublished PhD Thesis, Brown University 1960.

Crouzet, François, “The Impact of the French Wars on the British Economy”, in François Crouzet, *Britain, France and International Commerce: From Louis XIV to Victoria*. Aldershot: Variorum, 1996, pp.189-212.

Daniels, G. W., “American Cotton Trade in Liverpool under the Embargo and Non-Intercourse Act”, *American Historical Review*, 21, No. 2 (Jan 1916), 276-87.

Davis, Ralph, *The Industrial Revolution and Overseas Trade*. Leicester: Leicester University Press, 1979.

Dumbell, Stanley, “The Origin of Cotton Futures”, *Economic History*, 1 (1926-1929), 259-67.

Dumbell, Stanley, “The Beginnings of the Liverpool Cotton Trade”, *Economic Journal*, 34, No. 134 (Jun 1924), 278-81.

Dumbell, Stanley, “Early Liverpool Cotton Imports and the Organisation of the Cotton Market in the Eighteenth Century”, *Economic Journal*, 33, No. 131 (Sep 1923), 362-73.

Dumbell, Stanley, “The Origin of Cotton Futures”, *Economic History*, I (1926-1929), 259-67.

Esteban, Cuenca J., “British Textile Prices, 1770-1831: Are British Growth Rates Worth Revising Once Again?”, *Economic History Review*, 47, No.1 (1994), 66-105.

Esteban, Javier Cuenca, “Factory Costs, Market Prices, and Indian Calicoes: Cotton Textile Prices Revisited, 1779-1831”, *Economic History Review*, 52, No. 4 (1999), 749-55.

-
- Frankel, Jeffrey A., "The 1807-1809 Embargo Against Britain", *Journal of Economic History*, 42, No. 2 (1982), 291-308.
- Haggerty, Sheryllyne, *'Merely for Money'? Business Culture in the British Atlantic 1750-1815* (Liverpool: Liverpool University Press, 2012).
- Haggerty, Sheryllyne, *The British-Atlantic Trading Community 1760-1810: Men, Women, and the Distribution of Goods* (Leiden and Boston: Brill Press, 2006).
- Haggerty, Sheryllyne, 'Risk and Risk Management in the Liverpool Slave Trade', *Business History*, 51:6 (Nov 2009), 817-834.
- Hall, Nigel, 'The Liverpool Cotton Market: Britain's First Futures Market', *Transactions of the Historic Society of Lancashire and Cheshire*, 34 (1998), 149-69.
- Hall, Nigel, 'Liverpool's Cotton Importers c.1700-1914', *Northern History*, 54, No.1 (2017), 73-93.
- Hancock, David, "'Domestic Bubbling': Eighteenth-Century London Merchants and Individual Investments in the Funds", *Economic History Review*, 47, No. 2 (1994), 679-702.
- Hancock, David, "The Trouble with Networks: Managing the Scots" Early-Modern Madeira Trade", *Business History Review*, 79, Special Edition on Networks in the Trade in Alcohol (Autumn 2005), 467-91.
- Harley, C. Knick, and N. F. R. Crafts, "Cotton Textiles and Industrial Output Growth During the Industrial Revolution", *Economic History Review*, 48, No. 2 (1995), 134-44.
- Harley, C. Knick, "Cotton Textile Prices and the Industrial Revolution", *Economic History Review*, 51, No. 1 (1998), 49-83.

Harley, C. Knick, "Cotton Textile Prices Revisited: a Response to Cuenca Esteban", *Economic History Review*, 52, No. 4 (1999), 756-65.

Hedges, James B., *The Browns of Providence Plantation: The Nineteenth Century*. Providence: Brown University Press, 1968.

Howell, L. D., "Quality Price Differentials in Cotton Marketing", *Journal of Farm Economics*, 23, No. 1 (Feb 1941), 329-38.

Hull, John C., *Fundamentals of Futures and Options Markets*. 8th ed. Harlow: Pearson, 2014.

Hyde, Francis E., Bradbury B. Parkinson and Sheila Marriner, "The Cotton Broker and the Rise of the Liverpool Cotton Market", *Economic History Review*, New Ser., 8, No. 1 (1955), 75-83.

Lakwete, Angela, *Inventing the Cotton Gin: Machine and Myth In Antebellum America*. Baltimore and London: Johns Hopkins University Press, 2003.

McCusker, John J., "European Bills of Entry and Marine Lists: Early Commercial Publications and the Origins of the Business Press" Cambridge, MA: Harvard University Library, 1985.

McCusker, John J., "The Demise of Distance: The Business Press and the Origins of the Information Revolution in the Early Modern Atlantic World", *American Historical Review*, 110, No. 2 (Apr 2005), 295-321.

Mitchell, B. R., and Phyllis Deane, *Abstract of British Historical Statistics*. Cambridge: Cambridge University Press, 1962.

Riello, Giorgio, *Cotton: The Fabric that Made the Modern World*. Cambridge: Cambridge University Press, 2013.

Rothenburg, Gunther E., "The Origins, Causes, and Extension of the Wars of the French Revolution and Napoleon", *Journal of Interdisciplinary History*, 18, No. 4, The Origin and Prevention of Major Wars (Spring, 1988), 771-93.

Rutherford, Donald, *Routledge Dictionary of Economics*, 3rd ed. [1992]. London and New York: Routledge, 2013.

Schoen, Brian, *Fragile Fabric of Union: Cotton, Federal Politics, and the Global Origins of the Civil War*. Baltimore, MA.: John Hopkins University Press, 2009.

Silverstone, Scott A., *Divided Union: The Politics of War in the Early American Republic*. Ithaca and London: Cornell University Press, 2004.

Stephenson, Angus (ed.), *Oxford English Dictionary* (Oxford: Oxford University Press, 2010). Online ed.

Stillson, Richard T., *Spreading the Word: A History of Information in the California Gold Rush*. Lincoln and London: University of Nebraska Press, 2006.

Slauter, Will, "Forward-Looking Statements: News and Speculation in the Age of the American Revolution", *Journal of Modern History*, 81 (Dec 2009), 759-92.

Telser, Lester, "Why There Are Organised Futures Markets", *Journal of Law and Economics*, 24, No. 1 (1981), 1-22.

Temin, Peter, “The Causes of Cotton-Price Fluctuations in the 1830’s”, *Review of Economics and Statistics*, 49, No. 4 (1967), 463-70.

Vaillant, C., C. W. Morgan, A. J. Rayner and T. A. Lloyd, “Futures Markets for Agricultural Commodities in Developing Countries”, *Credit Research Paper*, 97/1. Nottingham: Centre for Research in Economic Development and International Trade, 1997.

Wadsworth, P., and J. de L. Mann, *The Cotton Trade and Industrial Lancashire, 1600-1780*. Manchester: Manchester University Press, 1931.

War, Christopher, “The Commerce of East Florida During the Embargo, 1806-1812: The Role of Amelia Island”, *Florida Historical Quarterly*, 68, No. 2 (Oct 1989), 160-79.

Williams, David M., “Liverpool Merchants and the Cotton Trade 1820-1850”, pp.19-51, in *Merchants and Mariners: Selected Maritime Writings of David M. Williams*, *Research in Maritime History*, No 18, compiled by Lars U. Scholl (International Maritime Economic History Association: St John’s, Newfoundland, 2000), pp.19-51.

Williams, Jeffrey C., “The Origins of Futures Markets”, *Agricultural History*, 56, No. 1, Symposium on the History of Agricultural Trade and Marketing (Jan 1982), 306-16.

Yu-Ho, Chun, and Dan Li, “A Mirror of History, China’s Bond Market, 1921-42”, *Economic History Review*, 67, No. 2 (2014), 409-34.

Zupco, Ronald Edward, *A Dictionary of English Weights and Measures From Anglo-Saxon Times to the Nineteenth Century*. Madison, Milwaukee and London: University of Wisconsin Press, 1968.

Online:

Jupp, P. J., “Spencer Perceval”, *Oxford Dictionary of National Biography Online*,
<http://www.oxforddnb.com/view/article/21916?docPos=10>, accessed 23 Jan 2017.