

# John Maynard Keynes, Man or Myth?

## The Incident of the Spanish Pesetas

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**Abstract:** John Maynard Keynes was and still is one of the world's most famous economists. One of the most fascinating stories about Keynes appeared in his obituary in the 1946 Proceedings of the British Academy. The story stated that during World War I with minimal financial resources Keynes broke the Spanish-British foreign exchange market, a manipulation that is illegal today. This research investigates if the story is myth or truth. Archival materials suggest Keynes did manipulate this foreign exchange market in April of 1918 and he potentially earned about 30 percent on his trades.

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John Maynard Keynes, who lived from 1883 to 1946, was and still is one of the world's most famous economists. His life included numerous highlights; from marrying a star ballerina to recreating the world's financial system at Bretton Woods in 1944. His books, from the *Economic Consequences of the Peace* (Keynes, 1920) to *The General Theory* (Keynes, 1936) were best sellers that are still read and argued about today. From 1912 to 1944 he was a major arbiter of what economists read and discussed as editor of *The Economic Journal*.

For economists one of the most fascinating stories about Keynes was first told by two of the British government's most senior financial officials, Sir Otto Niemeyer and Sir Richard Hopkins, in Keynes' obituary notice that appeared in the *Proceedings of the British Academy* (Pigou, 1946).<sup>1</sup>

There was urgent need for Spanish pesetas. With difficulty a smallish sum was raked up. Keynes duly reported this, and a relieved Secretary of the Treasury remarked that at any rate for a short time we had a supply of pesetas. "Oh no!" said Keynes. "What!" said his horrified chief. "I've sold them all again: I'm going to break the market." And he did.

This shows that with minimal resources Keynes was able to move financial markets. It is important for two reasons. First, the story is an economist's ultimate fantasy. Many economists daily explain supply and demand, or predict what will happen to supply and demand. However, the story shows the brilliant Mr. Keynes was able to actually move supply and demand at his will.

Second, as the next section shows, the story was recounted with admiration by Sir Niemeyer and Sir Hopkins. Keynes' alleged market manipulation happened a century ago. Today, that same manipulation would be grounds for universal condemnation by government officials, hefty fines and a long jail term. The story, whether true or not, shows how opinions about insider trading and market manipulation have changed dramatically in just a few generations.

The story was subsequently recounted by Roy Harrod in Keynes' official biography (1951, pg. 203). Harrod does not provide any more details or dates, but put this story immediately after a letter from Keynes to his mother dated July 17, 1915, implying that he broke the market shortly after 1915.

Beyond the official biography this story is recounted in many places. It is in Heilbroner's (1999) "Worldly Philosophers," a very popular book that recounts the lives and ideas of key economists. The identical story is in Spiegel (1991, pg. 602), another classic book that relates the history of economic thought. The story is a key entry for Keynes in Wikipedia, the online encyclopedia.

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<sup>1</sup> Keynes' obituary notice was created by A.C. Pigou. It consists of a number of remembrances by friends and colleagues about various aspects of his life. Niemeyer and Hopkins' piece is titled "Public Servant" (pages 401 to 405). The Spanish peseta story appears on page 402.

No matter how many times the story is retold, however, it is important to investigate and determine if the story is a myth or has truth.

### ***1. Are the Story's Sources Trustworthy?***

Before investigating the veracity of the story's details it is important to check if the people relating the story are trustworthy. Sir Otto Niemeyer and Keynes were first connected after each graduated from college. Keynes took the British civil service exam when he was not certain if he wanted to go into government service or academia. He placed second overall on the exam. Niemeyer placed first and went into the British Treasury. This examination was where Keynes placed eighth or ninth on the economics portion of the test. He later quipped that "I evidently knew more about Economics than my examiners."<sup>2</sup>

After taking the exam Niemeyer rose quickly through the ranks of the Treasury and in the 1920s became Controller of Finance, which is similar in rank to Assistant Secretary of Treasury in the U.S. Then in 1927 he switched from the Treasury to a position in the Bank of England where he was a Director, which is one level down from the top position. During the 1930s he took a simultaneous position as a Director at the Bank of International Settlements in Switzerland. He was also chairman of governors at the London School of Economics, a position similar to chairman of the board in the U.S. (The Times, 1971).

Sir Richard Hopkins spent much of his working life in the British Treasury. He rose through the ranks in various Internal Revenue departments, which oversaw British tax collection. He culminated his career with a position from 1942 to 1945 as the Treasury's Permanent Secretary, which is the department's top position (The Times, 1955).

These biographies indicate that the story comes from two men who attained some of the highest positions of responsibility in the British government's financial institutions. The story's sources are trustworthy individuals; this suggests the incident happened. Nevertheless, remembrances about a deceased person are often excessively positive and the story's details must be checked.

### ***2. Keynes, Currency and World War I***

Keynes spent much time and thought on currency. Before the war in 1913 Keynes was appointed secretary of a Commission to examine Indian Finance and Currency. This led Keynes to publish his first book (1913) entitled "Indian Currency and Finance."

Keynes' first post in the Treasury during World War I was Assistant to Sir George Paish, who was special advisor to the Chancellor of the Exchequer. It is doubtful that Keynes carried out the peseta trade during this posting from January to May of 1915 since his work for Sir Paish was to explain why consumer prices were rising rapidly in Britain and to determine if the general

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<sup>2</sup> <http://www.maynardkeynes.org/john-maynard-keynes-economist-1905-to-1914.html>

public's ability to convert British pounds into gold freely should be suspended (Keynes, 1971, pg. 57).

In May 1915 Keynes was transferred to the Treasury's First, or Finance, Division. Then on September 1, 1915 (Keynes, 1971, pg. 116) Keynes was promoted to second in command of the Finance Division, serving under Malcom Ramsay. Ramsay was the Assistant Secretary in charge of banking, currency exchange and allied finances. This position gave Keynes a potential position to execute the peseta trade, but as second in command he was not as likely to act with the impunity the story ascribes. Moreover, the story states the meeting happened between Keynes and his "horrified chief" who was the "Secretary of the Treasury." Ramsay was the Assistant Secretary, not the Secretary.

In early 1917 Keynes was promoted again. From February 1917 to January 1919 he was head of the "A" division. In the "A" division Keynes had a staff of 17 (Keynes, 1971, pg. 223) and was responsible for all of Britain's inter-allied financial arrangements. Keynes boasted after the war that "all the money we either lent or borrowed passed through my hands" (Keynes, 1971, pg. 3). As chief of financial arrangements with other countries Keynes was in an ideal position to act with relative impunity. In this job Keynes reported to Robert Chalmers, who was the "Joint Permanent Secretary of the Treasury" (Dostaler, 2007, pg. 138), which better matches the title of his chief in the story.

If Keynes did in fact "break the market," it would have likely made him feel very confident in his ability to trade in foreign exchange. After the war he speculated in foreign exchange, and lost a fortune before recovering. Moggridge (1983, pg. 4), writing about Keynes as an investor states, after the war "Keynes's activities were centered on the foreign exchange market."

In January 1920 Keynes organized a syndicate of friends and family to speculate in the foreign exchange markets. The syndicate initially raised £30,000 to use for trading and was co-led by Oswald "Foxy" Falk, who worked for Keynes in the Treasury's "A" division.<sup>3</sup> The syndicate initially did quite well by shorting the French Franc and going long in Indian Rupees. By the end of April the fund had about £17,000 in realized and unrealized gains. However, the markets turned quickly against Keynes and the syndicate was shut down in the summer of 1920 with losses of almost £23,000. Keynes lost so much money in the foreign exchange markets that 1920 was the only time in his life he had a negative net worth (Moggridge, 1983, Table 3).

Keynes' focus on trading foreign exchange after the war, his relative ease raising money for speculating in foreign exchange and his ability to convince a wartime Treasury employee to participate all support the idea Keynes had once successfully manipulated the foreign exchange market. The most likely time when this occurred is between February 1917 and January 1919, while Keynes was head of the "A" division.

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<sup>3</sup> Keynes fell out with Falk later in life (Millmow, 2012).

### ***3. Theoretically What Happened?***

Figure 1 shows in graphical form what Keynes was alleged to have done. The graph has two axes because foreign exchange can be quoted using one unit of home currency as the quote or one unit of foreign currency. The left axis shows how many British pounds were needed to purchase one Spanish peseta. Readers should focus on the right hand axis, which has an inverted scale, because foreign exchange in London was quoted during World War I as the number of foreign units for one British pound.

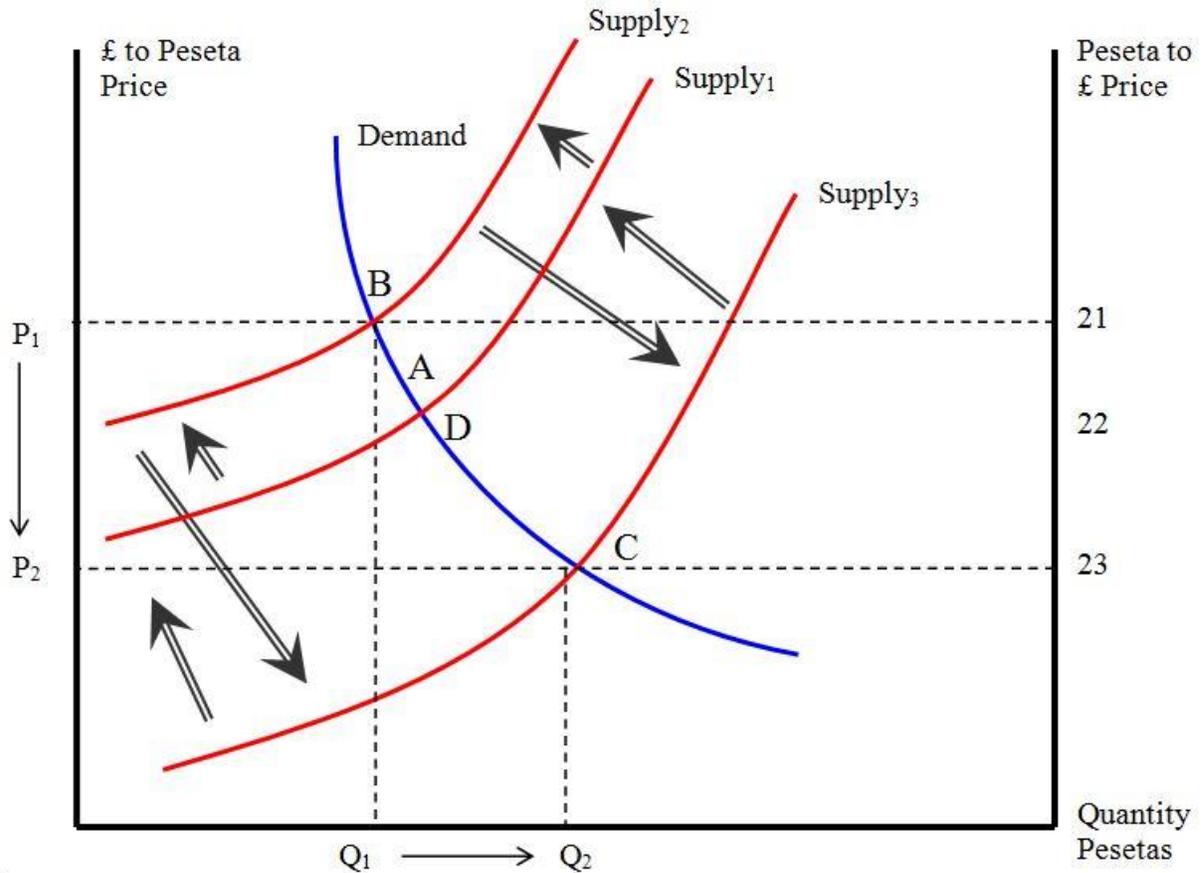
Assume the market is in equilibrium at point A just before the story begins. The first action causes a left shift in supply curve (Supply<sub>1</sub> to Supply<sub>2</sub>) when a “smallish sum was raked up.” The equilibrium moves from A to B and supply shifts left because Keynes begins to hoard pesetas removing Spanish currency from the market.

The next change is a sudden right shift in the supply curve (Supply<sub>2</sub> to Supply<sub>3</sub>) when Keynes “sold them all again.” This shifts the equilibrium from B to C because Keynes takes the hoarded pesetas and suddenly floods the market with a large supply of currency.

When Keynes breaks the market (Supply<sub>2</sub> to Supply<sub>3</sub>) the exchange rate needs to shift from a low number, like 21 pesetas, to a higher number, like 23 pesetas. The reason for the number becoming higher is seen in a simple example. Assume before Keynes’ action that Englishmen were able to buy a dozen Spanish oranges for 21 pesetas. By flooding the market with Spanish money Keynes made the peseta cheaper (each peseta was worth less). Cheaper money means Englishmen should be able to buy more oranges for every British pound they held. If the rate changed to 19 pesetas per British pound then Englishmen could not afford the dozen oranges, which is logically backward from the story. However, increasing the rate to 23 pesetas results in Englishmen being able to buy the dozen oranges and still have 2 pesetas left over.

Finally, the supply curve shifts left (Supply<sub>3</sub> to Supply<sub>1</sub>) as Keynes repurchases pesetas to fulfill the original “urgent need for Spanish pesetas.” This repurchase, which allows the British government to pay its debts, moves the market to point D which is close to or the same as the original point A that existed before Keynes’ market manipulations.

Fig. 1. Changes in Supply and Demand for Spanish Pesetas Caused By Market Manipulation



If Keynes was able to move the supply curve we should see the exchange rate move from a number like 22 pesetas per pound to 21 pesetas as Keynes hoarded currency (Point A to B). Then the exchange quote should make a sharp movement from a low number, like 21 pesetas per pound to a higher number, like 23 (Point B to C; Price  $P_1$  to  $P_2$ ) when Keynes dumped a large quantity of currency on the market (Quantity  $Q_1$  to  $Q_2$ ). Then, just as sharply the peseta should return to a lower number like 22, when Keynes ran out of money to continue manipulating the market (Point C to D). The exchange rate should follow a “W” shaped pattern.

#### 4. Peseta to Pound Exchange Rate

The key newspaper that Keynes read was The Times of London (The Times Digital Archive 1785-1985). The Times typically had a single page each day devoted to financial dealings. Every day from Monday to Saturday The Times had a column entitled the “Money Market” that tracked both foreign exchange rates and interest rates.

Foreign exchange rates for both purchase and sale were quoted daily from a variety of key cities outside of England. The Spanish rate was quoted from Madrid. Once or twice a week, often on Friday’s The Times also published the rate British banks were willing to cable money abroad. These British rates were either very close to the rates quoted daily from foreign cities or

identical. Because the cable rates do not occur as frequently as the Madrid quotes, this research only uses the Madrid numbers.

The rates quoted in the “Money Market” column were always the amount of foreign currency one British pound was worth. British readers interested in the amount of currency that one Spanish peseta purchased needed to do their own math. The Spanish peseta was subdivided into 100 céntimos. Gadea and Sabate (2004) point out that between 1883 and 1931 the Spanish peseta was a fiat currency with a flexible exchange rate regime.

Figure 2 shows a picture of the foreign exchange table printed in the Tuesday June 6, 1916 newspaper on page 14. In the table the left hand number is the buy price and the right hand figure is the sell price. For example, on June 5<sup>th</sup> the pound, found on the line labeled Madrid, was being bought by Spanish banks and money changers in that city at 22 pesetas and 75 céntimos. The same banks and money changers were selling each pound for 22 pesetas and 95 céntimos, netting them a 20 céntimo profit, called the spread, on every British pound they could buy and immediately resell.

Fig. 2. Foreign Exchange Table from “The Times”; June 6, 1916.

FOREIGN EXCHANGES.		
The following rates of exchange were current yesterday at places abroad :—		
Place.	June 5	June 3.
Paris ..	28f. 15c.—28f. 18c.	28f. 14c.—28f. 18c.
Amsterdam ..	11fl. 44c.—11fl. 47c.	11fl. 47c.—11fl. 50c.
Italy ..	30lr. 30c.—30lr. 40c.	30lr. 23c.—30lr. 33c.
Madrid ..	22p. 75—22p. 95	23p. 35—23p. 45
Lisbon ..	34 <sup>1</sup> / <sub>2</sub> d.—35 <sup>1</sup> / <sub>4</sub> d.	34 <sup>1</sup> / <sub>4</sub> d.—35d.
Switzerland	24f. 97c.—25f. 02c.	24f. 95c.—25f. 02c.
Christiania ..	15kr. 75—15kr. 85	15kr. 75—15kr. 85
Stockholm ..	15kr. 70—15kr. 80	15kr. 73—15kr. 83
Copenhagen ..	15kr. 77—15kr. 87	15kr. 78—15kr. 88
Petrograd ..	156 <sup>1</sup> / <sub>2</sub> r.—157 <sup>1</sup> / <sub>2</sub> r.	156r.—157r.
Alexandria ..	97 <sup>1</sup> / <sub>2</sub> pi.	97 <sup>1</sup> / <sub>2</sub> pi.
Bombay ..	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.
Calcutta ..	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.
Madras ..	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.	1s. 4 <sup>1</sup> / <sub>32</sub> d.—1s. 4 <sup>5</sup> / <sub>32</sub> d.
Hong-kong ..	2s. 0 <sup>7</sup> / <sub>32</sub> d.	2s. 1 <sup>3</sup> / <sub>32</sub> d.
Shanghai ..	2s. 11d.	2s. 11d.
*Singapore ..	2s. 3 <sup>15</sup> / <sub>16</sub> d.—2s. 4 <sup>1</sup> / <sub>16</sub> d.	2s. 4 <sup>5</sup> / <sub>32</sub> d.—2s. 4 <sup>9</sup> / <sub>32</sub> d.
New York ..	\$4.76 <sup>1</sup> / <sub>8</sub> —\$4.76 <sup>5</sup> / <sub>8</sub>	\$4.76 <sup>1</sup> / <sub>8</sub> —\$4.76 <sup>5</sup> / <sub>8</sub>
Montreal ..	\$4.77 <sup>1</sup> / <sub>4</sub> —\$4.78 <sup>1</sup> / <sub>4</sub>	\$4.77 <sup>1</sup> / <sub>8</sub> —\$4.78 <sup>1</sup> / <sub>8</sub>
*Buenos Aires		
90 days	48 <sup>31</sup> / <sub>32</sub> d.	48 <sup>31</sup> / <sub>32</sub> d.
*Valparaiso,		
90 days	8 <sup>13</sup> / <sub>16</sub> d.	8 <sup>13</sup> / <sub>16</sub> d.
*Montevideo	53 <sup>5</sup> / <sub>16</sub> d.	53 <sup>5</sup> / <sub>16</sub> d.
*Lima ..	3% discount	2% discount
*Rio de Jan.	12 <sup>5</sup> / <sub>16</sub> d.	12 <sup>5</sup> / <sub>16</sub> d.

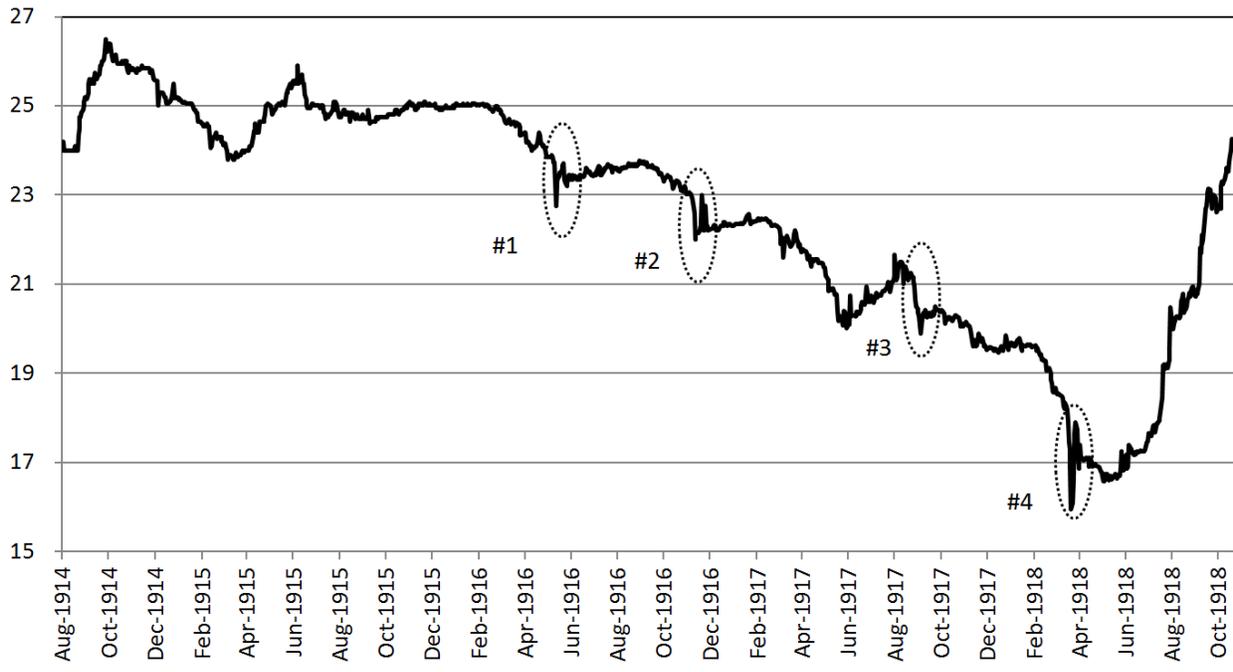
\* These rates are telegraphed on the day preceding their receipt.  
 Indian ...

Every buy and sell quote for Madrid during the World War I period was recorded in a spreadsheet. This results in 1,265 days of data. A small number of typological mistakes appear

in the foreign exchange record. For example, the May 22, 1915 table has a quote to buy of 25p 05 and sell of 25p 00. If this quote were accurate a trader with British pounds could make an infinite amount of money by simply buying pesetas and then immediately selling the pesetas back for British pounds. The raw data were fixed to correct six obvious typographical errors.<sup>4</sup>

Figure 3 graphs the number of Spanish pesetas that one British pound purchased using the daily buy price quoted each day in the Times. The figure shows that at the start of World War I, one British pound purchased about 25 Spanish pesetas. Close to the war's end in 1917 the British pound purchased just 17 pesetas, a drop of about one-third in value.

Fig. 3. Exchange Rate between Spanish Peseta and One British Pound: 1914 to 1918.



It is doubtful that changes in the exchange rate tracked by figure 3 were caused by British government policy. Atkin (2005) states clearly that the Spanish – British exchange rate was not one of the key ones for Great Britain during World War I. Second, there were no currency controls even though there were other controls such as the prohibition of buying foreign securities.<sup>5</sup> Third, the British government attempted to manipulate the pound-dollar exchange rate because it wanted to lower the cost of buying things from the U.S.A., but the key committee in charge has no record of influencing the Spanish peseta.

<sup>4</sup> Two of the six corrections fixed sell quotes that were below buy quotes. The dates of the correction were May 22, 1915 and July 26, 1915. One correction fixed the dates associated with the quotes of September 22, 1915. Three corrections fixed quotes where the typesetter appears to change the leading number like 19p to 18p. The dates of these three fixes were November 10, 1914, November 10, 1916, and August 15, 1919.

<sup>5</sup> Defense of the Realm Regulation 41D in Nov. 1917.

### 5. Possible Dates for the Manipulation

One method of finding a possible date for the episode is to visually look for times when the exchange rate had a sharp change in price over a very short time period and then returned to roughly its original value. Visually, four time periods stand out. Each is circled on figure 3.

The visual method is ad-hoc. A second more formal method of finding a likely date for Keynes' alleged peseta trade is to see if there are any newspaper stories that state an unexpected or suspicious movement in the exchange rate. Table 1 lists all stories published in the business section of "The Times" that had a headline about the Spanish exchange rate during the war period.

All the articles except one contained bland and understated comments about the peseta. The exception was an article on June 6, 1916, which matches event #1. The article's title is "Money Market: Fall in the Spanish Exchange" and it states "The most interesting movement in the foreign exchange was a heavy fall in the Spanish rate." The article had no further explanation. Examining many of the articles written in Money Market columns both before and after this article shows the column rarely contained adjectives like "interesting," suggesting this was a unique occurrence worthy of comment.

Table 1  
Headlines in "The Times" about the Spanish Peseta during World War I.

Date	Headline
25 July 1914	Spanish Exchange: The Increasing Value of the Peseta
6 June 1916	Money Market: Fall in the Spanish Exchange
6 Dec. 1916	Money Market: Spanish Exchange Weak
19 Jan. 1917	Spain: Trade Balance Improved
13 Jun. 1917	City Notes. Rubles and Pesetas
20 Aug. 1917	Money Market: Spanish Exchange Weak
27 Aug. 1917	Money Market: Sharp Rise in Spanish Exchange
22 Jan. 1918	Spain: Industrial Progress
19 Mar. 1918	Money Market: Low Spanish Exchange
19 Apr. 1918	City Notes. The Spanish Exchange
19 June 1918	Money Market: Fall in the Peseta
27 Nov. 1918	Money Market: Further Fall in the Peseta
11 Dec. 1918	Money Market: Rise in the Peseta
16 Dec. 1918	Money Market: Fall in the Peseta
21 Dec. 1918	Money Market: Rise in the Peseta

*Notes:* The list was created by doing business section searches for articles with a title of peseta, pesetas or Spanish exchange. Searches were also done for stories with peseta in the article and a title of Spain or Spanish.

A third method of seeking a date for Keynes' alleged market manipulation is to compute the percentage change in exchange rates over one, two, three and four day periods. These

percentage changes show how much money Keynes could have made when the market rose (point B to C in figure 1) and then fell (point C to D). The percentage change method identifies April 15, 1918 (event #4) as the date when Keynes could have made the most money. Over a one day period Keynes could have made profits of almost 6%; over a two day period about 8%; over a three day period 9%; and over a four day period almost 12%. The second most likely period identified by this method is June 5, 1916 (event #1), during which Keynes could have made around 4% a day.

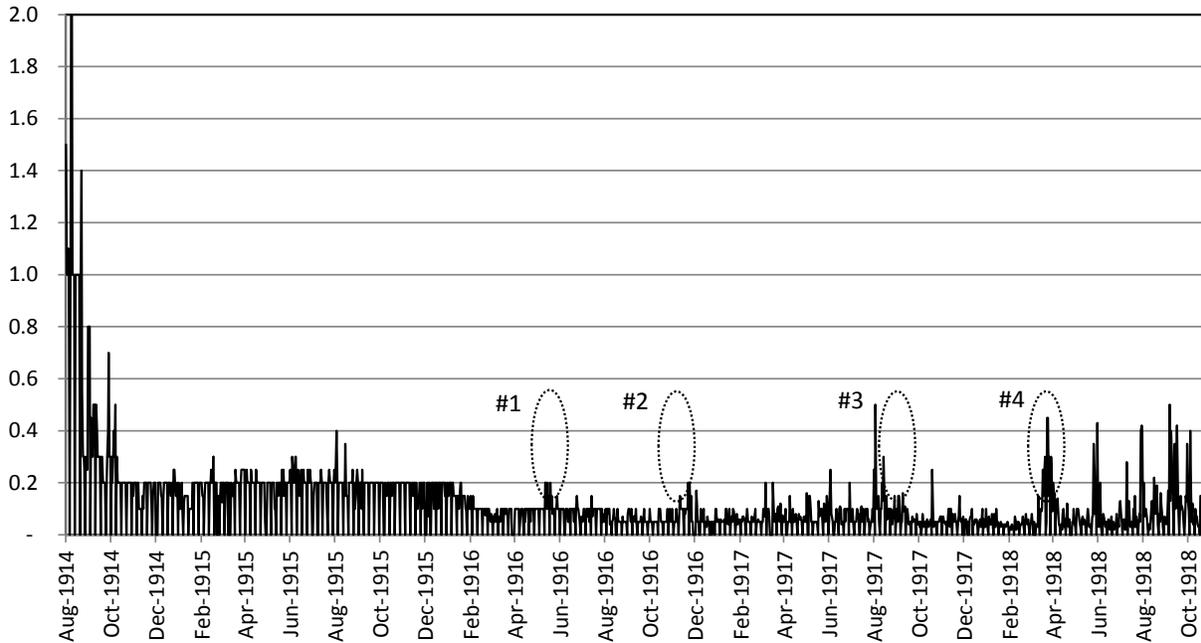
The final method is to look at the spread between the buy and sell price, illustrated in Figure 4. Manipulating the market typically results in a widening spread, because most of the activity is occurring on just one side of the market. For example, if Keynes wanted to sell a lot of pesetas there would likely be fewer participants willing to buy a large quantity, forcing the buy and sell price to diverge. When people become skittish because they don't know what is going on, they demand more of a premium between the buy and sell price to entice them to trade.

Figure 4 shows a 2 peseta difference at the war's beginning between the buy and sell price, which was an 8% difference. The spread rapidly shrank after the early uncertainty and by 1915 the spread fell to around 0.2 peseta. By 1916 the spread was often 0.1 peseta. Imposed on Figure 4 are the four ovals from Figure 2, which track potential times for market manipulation.

Event #3 occurs close to but after a large spread. Only event #4 shows a large increase in the buy-sell spread for multiple days in a row at the same time as the exchange rate moves dramatically, which would have allowed Keynes to make a large profit.

While the ad-hoc visual method indicates four occasions of sharp changes in the exchange rate, the three more formal methods do not identify events #2 or #3 as possible times when Keynes could have manipulated the market. The next section reviews the important news stories during all four events, and suggests only event #4 fits the story of Keynes manipulating the market.

Fig. 4. Spread in Pesetas between the Buy and Sell Rates: 1914 to 1918.



## 6. Historical Events during the Four Time Periods

Sharp rises and falls in foreign exchange rates could occur because of important news events, rather than market manipulations. Table 2 contains the day-by-day foreign exchange values for event #1 in early June 1916, and the associated headlines from “The Times” newspaper. If Keynes manipulated the market the most likely dates were from Saturday June 3<sup>rd</sup> until Tuesday June 6, 1916. The table shows the pound on Saturday was worth 23 peseta and 73 centimos. Over the next two trading days the pound was worth almost 1 peseta less, before recovering some of its value. The pound experienced a 4.1% drop in value followed by a 2.4% rebound, suggesting someone who timed the market well would have made over a 6% gain. However, the exchange rates follow only a V shape pattern, and not the H shape suggested by the story.

Table 2  
Spanish Peseta Prices during early June 1916.

<b>Date</b>	<b>Madrid Buy</b>	<b>Madrid Sell</b>	<b>Spread</b>	<b>% Change</b>	<b>Times Headlines</b>
6/3/1916	23 p 73	23p 83	0.10		Great Naval Battle. Heavy Losses. Six British Cruisers Sunk. Eight Destroyers Lost
6/4/1916	Markets	Closed			
6/5/1916	22 p 75	22p 95	0.20	-4.1%	Nearing a Crisis in Verdun. German Bid for the Inner Lines. Furious Battles on the East
6/6/1916	23 p 30	23p 50	0.20	+2.4%	Russia Moves. Heavy Defeat of Austrians
6/7/1916	23 p 40	23p 50	0.10	0.4%	Death of Lord Kitchener. Lost in Sunken Cruiser. A Mission to Russia

The news headlines from “The Times” suggest that the changes in the exchange rate were not caused by Keynes but instead by dramatic war news. On Saturday June 3<sup>rd</sup> the press reported a large naval battle in the North Sea, off the coast of the Netherlands. In that battle the Germans sneaked up on the British navy through heavy fog. The newspaper reported 14 large British ships were lost but only one German ship was sunk. On Monday, June 5<sup>th</sup> the newspaper reported British ground forces near Verdun were being overrun by the German army. The news turned more optimistic on Tuesday June 6<sup>th</sup> with news of Russian forces defeating the Austrian army. Overall, during these four days, currency traders were hearing dramatic news about the war.

Keynes’ personal life also makes event #1 an unlikely time for him to have manipulated the markets. The headlines of June 7<sup>th</sup> report the death of Lord Kitchener and his party, who were traveling to Russia. Lord Kitchener was the Cabinet Secretary in charge of war, a position equal to the U.S.’s Secretary of Defense. Kitchener’s boat struck a mine the night of June 5<sup>th</sup> and sank, losing almost everyone on board. According to his official papers “Keynes had been working with members of the party and until the last moment had expected to accompany them” (Keynes, 1971, pg. 188). It is difficult to believe Keynes would have manipulated financial markets when he was expecting to be out of touch at sea and preparing for important international negotiations.

Event #2 occurred at the end of November and the beginning of December 1916. On November 30<sup>th</sup> the exchange rate was 23 pesetas to the pound. The rate hit a low of 22 pesetas on December 5<sup>th</sup> and bounced back to 23 by December 14<sup>th</sup>. During this time period British Prime Minister Asquith resigned on December 4<sup>th</sup> and a new government headed by David Lloyd George was installed on December 7<sup>th</sup>. It is unlikely event #2 was when Keynes manipulated the market, first because the political events provide a simple explanation for the exchange rate movements. Second, the exchange rate fell just 4%. This fall took four trading days to occur

and the subsequent 4% rise took eight trading days. An 8% gain over a period of almost two weeks likely would not be called breaking the market by contemporaries.

Event #3 occurred in September and early October of 1917. On September 4th the exchange rate was 21.45 pesetas to the pound. The rate hit a low of 19.9 pesetas on September 28<sup>th</sup> and bounced back to 20.43 by October 4<sup>th</sup>. During this time period England's ally, Russia, experienced dramatic changes. The general in charge of all Russian forces, Lvar Kornilov, attempted a coup against the government. Alexander Kerensky, the head of the provisional government, declared himself dictator. Many Bolsheviks were freed from jail. Like event #2, it is difficult to match event #3 with the story since the rise and fall took a month to occur and by trading at the exact high and low moments Keynes could have made about 10%.

Event #4 occurred in mid-April 1918. Table 3 contains the day-by-day foreign exchange values for mid-April 1918, which is the most likely time frame for the story. If Keynes manipulated the market the most likely dates were from Monday April 8<sup>th</sup> to April 24<sup>th</sup>, a 15-day trading period, not counting the two Sundays when trading did not occur. In this time frame the exchange rate follows the  $\text{N}$  shaped pattern suggested by the story, with the rate dropping by almost 13% (18p 27 to 15p 95), rising by about 12% (15p 95 to 17p 90), and finally falling by about 6% (17p 90 to 16p 86). Combined these result in over a 30% profit.

Table 3  
Spanish Peseta Prices during mid-April 1918.

<b>Day</b>	<b>Madrid Buy</b>	<b>Madrid Sell</b>	<b>Spread</b>	<b>% Change</b>	<b>Times Headlines</b>
4/8/1918	18p 27	18p 37	0.10	-0.4%	The Allied Front in Picardy
4/9/1918	18p 17	18p 26	0.09	-0.5%	Arras Again Threatened. Great German Gunfire
4/10/1918	17p 93	18p 03	0.10	-1.3%	Battle in the North. German Advance to the Lys.
4/11/1918	17p 45	17p 70	0.25	-2.7%	The Northern Battles. Fight for Messines Ridge. The Recapture of Givenchy.
4/12/1918	17p 30	17p 45	0.15	-0.9%	The Threat in the North. Hard Fighting At Messines Ridge
4/13/1918	16p 96	17p 20	0.24	-2.0%	Pressure on Bailleul. Northern Thrust Deepens. Loss of Merville
4/14/1918	Market	Closed			
4/15/1918	15p 95	16p 25	0.30	-6.0%	Germans Held for Two Days On Northern Front
4/16/1918	16p 10	16p 15	0.05	+0.9%	The Battles of Merville
4/17/1918	16p 60	17p 05	0.45	+3.1%	Loss of the Ridge
4/18/1918	17p 60	18p 05	0.45	+6.0%	French in the Battle. Great Fight for Ypres Hill.
4/19/1918	17p 65	17p 80	0.15	+0.3%	Fight For Givenchy. Germans Heavily Beaten
4/20/1918	17p 90	18p 20	0.30	+1.4%	The Battle of Givenchy. Heavy German Defeat. Enemy at a Standstill.
4/21/1918	Market	Closed			
4/22/1918	17p 75	18p 05	0.30	-0.8%	Ireland and Compulsion. Canada's Duty to Her Soldiers. Calling Up Order Signed."
4/23/1918	17p 20	17p 45	0.25	-3.1%	Great Air Fights. The Death of Richthofen.
4/24/1918	16p 86	16p 95	0.09	-2.0%	Great Naval Raid. Belgian Ports Attacked. Success Near Robecq

Headlines in “The Times” of England show no major news during this time frame that would significantly change the British-Spanish exchange rate.<sup>6</sup> Around April 13, 1918 the major stories in the paper were about battles on the Northern front near Armentieres, Givenchy, and Ypres,

<sup>6</sup> Unlike today, “The Times” published the major news during the war in the middle of the newspaper, typically on pages 6 and 7. The front page had birth, marriage and death notices.

which are all small towns located near the French-Belgian border. The stories are roughly evenly split between British success, stalemate and loss. Moreover, the stories suggest that relatively small amounts of land were being lost or gained.

The other major news topics were discussions about conscripting more men to fight. Early in the war drafting men was not necessary since so many volunteered to fight. However, as the war dragged on and the death toll mounted, drafting able-bodied men became necessary. Bills were passed in Parliament requiring Irish men to fight and both Canada and England reduced the types of reasons that excluded men from serving.

Examining the news headlines for the four possible events suggests that if Keynes manipulated the market the most likely time was event #4, during mid-April of 1918. Event #1 is not likely because Keynes was expecting to be on a boat to Russia during the dates it occurred. Event #2 is not likely because it has the least increase in spread among the four possible events and does not follow a “U” shaped pattern. Event #3 is not likely because the spread narrows after the exchange rates begin to make a large movement. Additionally, while event #3 begins with a strong downward movement in the exchange, the upward jump is relatively small and would likely not lead contemporaries to believe Keynes “broke the market.” Only event #4 follows the “U” shaped pattern and has a large enough movement to make the event memorable.

### ***7. Does a Memo Exist on the Incident?***

The optimal solution for verifying the story is to find a memo written by Keynes about the incident. Unfortunately, after extensive searching, detailed below, no memorandum was found.

Known letters, memos and books written by Keynes are collected in a 30-volume set published by Cambridge University Press (Keynes, 1971). Searching his official letters written during his years at the Treasury shows no mention of the incident. Volume 16, chapter 3 of the 30-volume set contains a memo that Keynes wrote called “Inter-allied finance, 1917-1918.” This memo discusses in great detail the problems if Britain abandoned a fixed exchange rate between the pound and gold bullion. Keynes was quite proud of the stability of British exchange rates and wrote, “To point out the depreciation of the German exchanges and the stability of our own has been our favourite form of propaganda in all parts of the world” (Keynes, 1971, 222).

This stability was not created by law, but instead by constant intervention in the foreign exchange markets. Keynes wrote at the beginning of World War II, “In the last war there was no exchange control as such,....there were free dealings over the exchange at a rate which was ‘pegged’ by the Treasury, unlimited dollars being supplied at this rate” (Keynes, 1971, 210).

A second collection of Keynes’ personal papers is in the Archive Center of King’s College in Cambridge where Keynes taught for many years. Papers from his Treasury years of 1915 to

1919<sup>7</sup> and the informal discussions in 1914<sup>8</sup> leading up to the job are extensively catalogued. For example, in the 1914 collection is a “Note of a conversation with Higgs, at the Automobile Club, concerning Egypt's financial situation and the cotton supply in England” from September 12, 1914. However, no record was found in King’s College Archive of the Spanish peseta incident.

A third source of information is the official Archives of the Treasury Department. All Treasury records from the World War I period have been stored in the United Kingdom’s National Archives. Simon Fowler,<sup>9</sup> an ex-employee who previously had worked in the Archives for 30 years and who specialized in World War I materials was hired. His search of the National Archives did not turn up any memo on the affair.

However, Keynes’ official memos might not reference this incident since the entire affair might have been either unofficial, a war secret or illegal. If a memo does exist it is not easy to find.

### ***8. Trade Statistics***

The story states that “a smallish sum was raked up.” How much was a smallish sum? Since a memo does not appear to exist, other methods of determining how much money Keynes used are needed. One method of determining the sum is to use trade figures. The left side of Table 4 shows the United Kingdom’s total imports, exports and the trade deficit with Spain around World War I.

In 1913, before the War began, the United Kingdom imported £13.4 million worth of goods and services from Spain. In 1916, during the middle of the war, imports had grown to £24 million. British imports continued to grow as the war progressed and reached over £30 million by 1918. During the same time frame British exports shrank. In 1913 British exports to Spain were valued at £7.9 million, but by 1918 exports had fallen to £3.9 million.

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<sup>7</sup> <http://janus.lib.cam.ac.uk/db/node.xsp?id=EAD%2FGBR%2F0272%2FPP%2FJMK%2FT>

<sup>8</sup> <http://janus.lib.cam.ac.uk/db/node.xsp?id=EAD%2FGBR%2F0272%2FPP%2FJMK%2FET>

<sup>9</sup> The archivist’s website is <http://www.history-man.co.uk>.

Table 4  
British Imports and Exports to and from Spain in Millions Pounds Sterling

<b>Year</b>	<b>Total Imports</b>	<b>Total Exports</b>	<b>Trade Deficit</b>	<b>Pyrites Imported</b>	<b>Iron Ore Imported</b>	<b>Coal Exported</b>
<b>1913</b>	£13.4	£7.9	£5.5	£1.0	£4.5	£2.1
<b>1914</b>	13.2	6.4	6.8	1.0	3.2	1.8
<b>1915</b>	17.8	6.2	11.6	1.3	4.6	1.6
<b>1916</b>	24.1	8.5	15.5	1.9	7.3	2.8
<b>1917</b>	21.8	4.8	17.0	2.0	8.3	1.1
<b>1918</b>	30.3	3.9	26.4	2.2	9.0	0.8
<b>1919</b>	33.2	11.1	22.1	0.9	7.7	2.4
<b>Total 1914-1918</b>	107.1	29.7	77.4	8.5	32.4	8.3

*Notes:* Source is Board of Trade (1929). Imports were items imported for use in the United Kingdom and were not trans-shipped to other countries.

In the middle column's bottom row is the figure £77.4 million pounds sterling. This represents England's total trade deficit during World War I with Spain. While this figure appears large, Keynes, writing over a year before hostilities ended, states the British Treasury had spent £5.1 billion on the war (Keynes, 1971, pg. 248). Making the extreme assumption that Keynes was responsible for paying 100% of the trade deficit puts an upper bound of £77 million on the amount of money Keynes had to manipulate the market.

The £77 million figure is a misleading overestimate because total import and export figures combine private and government purchases. Keynes, however, would only have needed to pay for the British government's expenditures with Spain, not all British trade during the war years. While private international trade was more difficult during the war it did continue. For example, Britain imported over £150 thousand in paint colours and pigments during the war from Spain and exported to Spain over £50 thousand of soap, products not crucial for the war effort. Second, in 1918, Keynes was probably not paying for expenses incurred in the first years of the war, but only for more recent purchases.

The right side of table 4 contains the values of the most important imports and exports during the war years. A key British export, which earned the country pesetas, was coal. The top five imports, which comprised almost two-thirds of all imports during the war were: iron ore; oranges; sheets and bars of lead; iron pyrite and onions (Statistical Office of the Customs and Excise Department, 1919, table 10). Iron ore, pyrite and lead were important ingredients in making arms and munitions.

Oranges and onions are not listed in table 4 because after the war the government published an extensive document (House of Commons, 1921) listing what was purchased for the war effort

and where the items originated. The report specifically states that oranges were bought from Italy and onions were purchased for the war effort from California.

The Ministry of Munitions on page 94 of the report states they purchased pyrite, also called fool's gold, but does not identify the country. However, six lines later they make a special note that the Ministry had to pay excess freight charges on coal to Spain. A specific country is likely not identified because the British government purchased pyrite from both local<sup>10</sup> and foreign mines during the war. Lead and iron ore are not mentioned in the report.

After the war the government also published a special extremely detailed report on the raw and finished materials used in the war effort (House of Commons, 1920). For example it shows the British government purchased 164 million pairs of socks and 62 million pairs of boots for the war effort. This report does not list either lead or iron ore as one of the raw materials the government directly purchased.

Secret War Cabinet papers (National Archives, 1917), which have been declassified, contain a set of memos from 1917 entitled "Conveyance of Iron Ore from Spain." The memos show British officials trying to figure out if it was possible to move iron ore from Spain overland to a Northern French port. The set's concluding memo closes the discussion by stating there are not enough trains and people available to implement the idea. These memos suggest the British government wanted to buy Spanish ore directly, but could not for logistical reasons.

Iron ore is mentioned in the War Cabinet report that summarized 1918. The report states "An agreement on commercial matters had been signed with Spain late in 1917 and worked well throughout the year, enabling the United Kingdom to draw much needed supplies of iron ore and other necessaries" (The War Cabinet, 1919, pg. 31). Unfortunately, no further details on the agreement were found. The lack of any direct mention in the summary procurement reports produced after the war suggests the government was not directly purchasing the ore from Spain. Instead, the memos found make it appear likely that private companies bought the ore and sold the resulting iron and steel to the government.

Trade figures, shown in table 4, reveal during the war total British imports of Spanish pyrite were £8.5 million, iron ore imports were £32.4 million and coal exports were £8.3 million. Making the extreme assumption again that Keynes was responsible for paying 100% of the difference between pyrite and iron ore imports and coal exports produces an upper bound figure of £32.6 million, which is less than half the total trade deficit of £77 million.

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<sup>10</sup> The report on page 95 states British pyrites came from the Cae Coch mine in Wales. The online history of Cae Coch states the mine was extensively used in the 1800s but was shut down in the early 1990s because overseas pyrite was better quality. The mine reopened during World War I when obtaining foreign pyrite became difficult. ([http://www.subbrit.org.uk/sb-sites/sites/c/cae\\_coch\\_sulphur\\_mine/index.shtml](http://www.subbrit.org.uk/sb-sites/sites/c/cae_coch_sulphur_mine/index.shtml)).

## ***9. How Big Was the Trade?***

The previous section produced a rough upper bound figure of £32.6 million on the amount of money Keynes was using to manipulate the market. This figure does not match the story's statement that "a smallish sum was raked up." This section provides evidence that the figure Keynes had at his disposal was in the thousands, not millions, of pounds.

After the war ended the United Kingdom revealed how much it owed Spain. On April 23, 1919, about six months after the War ended, "The Times" (1919) mentioned in a very short newspaper article that the British government arranged to borrow from Spain 75 million pesetas, which was worth £3 million, at 5 percent interest. The negotiations included two special trade clauses. First, Spain could ship oranges to England without any import duties. Second, England could ship to Spain 150,000 tons of coal a month without any duties. The duration of the loan is not mentioned.

The previous section's trade figures suggested that Keynes was trying to pay off part of the trade deficit of £77 million by paying current bills. However, using trade figures is misleading. During 1918 Keynes was in charge of the "A" division. Sir Thomas Heath (1927), one of three permanent Secretaries to the Treasury during the war years, wrote a detailed account of the functions of each office. Keynes and the other officials working the "A" division were not in charge of paying bills. Instead they were in charge of borrowing and lending money to finance the government. Keynes states this clearly in his previously mentioned quip that "all the money we either lent or borrowed passed through my hands." Paying bills was the province of the Supply or "C" Division.

Keynes was not an accountant in charge of bills during World War I. Instead, he acted as a banker, creating and settling loans between United Kingdom and other countries. Therefore, it is extremely likely that the "smallish" funds Keynes needed were enough pesetas to pay off the interest and potentially the principal owed on Britain's debt with Spain during the war. While the loan's terms are not known, a realistic assumption is that Keynes was making quarterly payments of both principal and interest on a debt of £3 million at 5%. If the loan was due in two years he needed about £400 thousand per quarter. If the loan was due in five he needed about £170 thousand and if it was due in ten years he needed about £100 thousand.

These figures suggest Keynes might have had £100 thousand to £400 thousand worth of Spanish currency to "break the market." These figures imply a profit of £30 thousand to £120 thousand for the government if Keynes made a 30% return. Keynes could not have had much less than £100 thousand or his trades would not have made an impression that lasted decades.

## ***10. Conclusion***

Foreign exchange markets are some of the world's largest financial markets. Currently, over \$5.3 trillion of currency is traded every day (Bank for International Settlements, 2014). The

world's daily GDP is currently around \$0.2 trillion (World Bank, 2014). In simple terms, roughly twenty-six times as much currency is traded every day as the world's actual production.

Today it is impossible for a "smallish sum" to roil the foreign exchange markets since they are so large. However, in 1918 the data suggest but cannot prove John Maynard Keynes was both able to temporarily disrupt the rate between the British pound and the Spanish peseta market and potentially earn 30% for the British crown.

The story's key point was that Keynes broke the market, but what constitutes breaking a market is never defined. If breaking means a major disruption then simply looking at the peseta-pound exchange rate graph shows no time during World War I when the market stopped trading and resumed at a very different price. However, if breaking the market means an interruption of continuity then the graph clearly shows the market was disrupted.

While the story was told to bolster Keynes' reputation after his death, the event raises troubling moral questions. What if the market manipulation had failed and instead of making a large profit, Keynes had lost most of the "smallish sum" and the "urgent need for Spanish pesetas" could not be met? Was it ethical for Keynes to have manipulated the market even if his motives were solely to make a profit for King and country, with no personal gain expected? The recounting of the story is too brief to answer these questions, but the phrase "his horrified chief" suggests these kinds of concerns were on the minds of Keynes' superiors.

While no memo or other hard evidence exists to prove the story, sufficient evidence is collected to indicate the story is credible and pinpoint when the event occurred. Keynes profitably manipulated the pound-peseta market in April 1918, but the idea that he "broke" the market is an exaggeration meant to burnish Keynes' post-mortem reputation.

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