

Financial History Chronicle

DID THE FINANCIAL MARKETS SEE THE GREAT WAR COMING?

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A look at the literature reveals that we still know little about whether the financial markets saw the outbreak of the Great War coming. Analyzing sovereign bond prices in the run-up to the war, Ferguson (2006, pp. 73-74) has argued that its outbreak came as a true surprise for the London financial market. Bondholders assessed the possibility of a great war breaking out as extremely low until the very last days of July 1914, when sovereign bond prices dropped abruptly, leading to the closure of the stock exchange on 31 July 1914.

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This assessment is based on what most fundamentally determines a bond price, namely, how bondholders value the underlying asset. In the case of a sovereign bond, this underlying asset is a state's long-run financing capacity. A bond's value at a particular point in time equals the current value of all future streams of interest payments and the principal that is to be redeemed. Technically, besides a bond's financial characteristics, the prime determinants of a bond's value are the default probabilities that bondholders attach to each payment stream (determined, in turn, by expectations based on economic fundamentals, such as economic growth), bondholders' rate of time preference and their inflation expectations, and idiosyncratic shocks (e.g., Weidenmier and Oosterlinck, 2007). Historically, being involved

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in a war has affected both a state's ability and willingness to service its debts. It is above all the outcome of the war that determines the likelihood of bondholders receiving payments. If the borrowing country comes out victorious, it might shift some war costs (in the form of reparations) onto the defeated country (or countries) in order to take pressure off its own government finances or, if it is defeated, it would instead be forced to pay (White, 2001; Occhino *et al.*, 2008). Thus, we may conclude that bondholders trading on the London sovereign bond market did not see a reason to adjust their combined default and inflation expectations or their time preference until they were caught off guard by the actual events around the outbreak of the war on 28 July 1914.

Ferguson's conclusion on investor opinion seems to back one recent path taken towards explaining the outbreak of the Great War. This path may be put under the "sleepwalker hypothesis" label advanced by Clark (2013) – the unwanted, more or less unconscious slide into the war that was born out of negligence. However, there is also a more recent study, which to a certain extent supports the more traditional view of seeing the war as being the natural end point of a road of steeply rising political and military tensions among the European powers, fueled especially by an "arms race" (Eloranta, 2007). Analyzing two Ottoman government bonds traded on the Istanbul Stock Exchange between 1910 and 1914, Hanedar *et al.* (2015) argue that investor's trades implied rising country risk due, especially, to the conflicts in the Balkans in 1911 and 1912, in which the Ottoman Empire was involved. This led the Istanbul market and Turkish politicians to lend greater credence to the rather high likelihood that a great war would soon break out.

The following table is an attempt to verify Ferguson's financial market-related "surprise hypothesis" for three important European markets, namely Paris, Berlin, and Amsterdam. The table shows the price evolution of selected sovereign bonds in the weeks preceding the closures of these stock exchanges. For illustrative purposes, the price for the first week after the respective exchanges reopened is shown too. Due to the fact that the cross-sections of sovereign bonds traded at the four trading places differ, an attempt has been made to put together a representative-enough sample of the major powers' bonds in order to best demonstrate what happened. If markets had expected the outbreak of the Great War, a gradual and pronounced decline in the price of a major power's bonds would have occurred between January 1914 (or perhaps earlier) and the final trading days before trade was stopped. This could be interpreted as a sign that the market was gradually factoring the increasing risk

Table
World War One: a Surprise to Investors?

Trading place/ Bond	3 January 1914	18 April 1914	25 July 1914	28 July 1914	1 August 1914	29 August 1914	Did the outbreak of the war come as a surprise?	Price in first week after resumption of trade in the particular bond
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
London								
German 3.0% imperial loan	75.0*	77.0*	75.0*	—	72.0*	—	Yes	54.0 (27 February 1915)
Hungarian 4.0% kroner perpetual	83.0	83.0	77.0	—	74.0	—	No	53.0 (30 January 1915)
Russian 5.0% of 1906	102.7*	104.0*	102.0*	—	93.0*	—	Yes	93.2 (2 January 1915)
Turkish 4.0% of 1903	77.8 ^a	83.0	80.5	—	78.0	—	Yes	62.0 (16 January 1915)
UK 3.0% consols	71.7*	75.7*	74.9*	—	69.2*	—	Yes	68.5 (2 January 1915)
Paris								
Austrian 4.0% of 1876-1892 (8 fl.)	89.0	86.7	84.3	—	—	—	No	59.0 (14 May 1915)
French 3.0% perpetual	85.2	86.7	80.0	—	—	75.0 ^b	Yes	70.5 (19 December 1914)
Hungarian 4.0% (4 fl.)	90.4	85.7	79.0	—	—	—	No	65.0 (19 December 1914)
Russian 5.0% of 1906	103.0	103.7	91.3	—	—	89.7	No (?)	93.5 (9 January 1915)
Serbian 4.0% (20 fr.)	83.4	81.0	73.5	—	—	64.0	No	66.0 (9 January 1915)
Turkish 4.0% of 1903 (20 fr.)	86.0	81.7	79.8	—	—	—	Yes (?)	62.0 (9 January 1915)

Trading place/ Bond	3 January	18 April	25 July	28 July	1 August	29 August	Did the outbreak of the war come as a surprise?	Price in first week after resumption of trade in the particular bond
	1914	1914	1914	1914	1914	1914		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Berlin								
Austrian 4.0% kroner perpetual	84.2	82.6	74.0	73.0 ^d	-	-	No	-
German 3.5% imperial loan	85.3	87.1	85.9	84.0 ^c	-	-	Yes	-
Hungarian 4.0% kroner perpetual	82.4	82.0	75.5	71.2 ^d	-	-	No	-
Russian 4.0% consols of 1880	87.9	86.6	81.0	76.0 ^d	-	-	No	-
Serbian 4.0% of 1895	79.3	78.7	72.1	64.7 ^d	-	-	No	-
Amsterdam								
Austrian 4.0% kroner perpetual	82.3	82.8	78.5 ^e	72.0	-	-	Yes	56.1 (24 August 1915)
German 3.0% imperial loan	75.2	76.8	75.9 ^e	75.0	-	-	Yes	57.7 (3 September 1915)
(Apr/Oct)								
Hungarian 4.0% kroner perpetual	83.1	82.0	78.5 ^e	78.0	-	-	No (?)	54.5 (24 August 1915)
(100/1 000)								
Russian 5.0% of 1906 (500)	100.7	99.5	99.9 ^e	94.5 ^f	-	-	Yes	81.1 (24 August 1915)
Turkish 3.0% of 1903 (500)	80.1	77.5	78.0 ^e	73.9 ^f	-	-	Yes	51.0 (26 August 1915)

Notes: The London Stock Exchange remained closed between 31 July 1914 and 4 January 1915. The Paris Stock exchange remained closed between 1 August and mid-August 1914, and then again between 2 September and 14 December 1914. The Berlin Stock Exchange remained closed for trade in bonds between 31 July 1914 and 1 September 1919. The Amsterdam Stock Exchange remained closed between 29 July 1914 and 9 February 1915. Prices are in percent of par value and rounded to one decimal place. London and Paris prices are from a weekly sample I gathered, with prices recorded for Saturdays. The London price marked with "a,b" is the average of the daily minimum and maximum prices reported in the respective source. Paris and London prices are reported on Saturdays but refer to the previous Friday. In parentheses at the end of the bond name a necessary addition is made to identify the subseries (either denomination or months of interest payments). Sources do not always identify the subseries for which the price is reported. ^a Price is for 30 January. ^b Price is for 22 August. ^c Price is for 29 July. ^d Price is for 30 July. ^e Price is for 24 July. ^f Price is for 27 July.

Sources: Jopp (2021, Ch. II.2.2, Table 9, and Ch. III.1., Table 18).

of war into bond prices. However, if the outbreak of the war had come as a surprise, such a gradual decrease would not be observed, or the decrease would happen suddenly, right when war broke out on 28 July 1914.

The evidence presented in the table implies that financial market data, when broken down to single securities, do not give a unanimous picture. Investors at the different trading places might have judged the sovereign risk of the same country differently; e.g., the assessment of Austria's country risk in Paris and Berlin compared to the Amsterdam market. However, the evidence generally supports the "surprise hypothesis" for all marketplaces. When the table shows that the outbreak of the war did apparently not come as a surprise for traders in Austrian, Hungarian, and Serbian bonds, this should be taken as reflecting the fact that a *local* conflict was thought to be coming. Such a conflict could have involved Russia as well, as the protective power in the Balkans. This conclusion is supported by the behavior of the Paris and Berlin market prices. An all-out conflict seemed to be an unlikely event in the eyes of investors trading in all the major European marketplaces. This assessment holds regardless of the formal interconnections between the major powers via bilateral or multilateral alliances, which traders of the day presumably knew about. We may say, therefore, that investors did not generally believe in the credibility of the threats inherent in the alliance system that had been established over the past three or so decades prior to the Great War. What is more, after resumption of trade in late 1914 or sometime in 1915, prices for all countries show a severe downward adjustment compared with the last pre-war prices. This difference can be interpreted as the bondholders' net downward adjustment of their default expectation, informed by the initial campaigns over the first part of the war and, in particular, by the insight that the war would not be as short as had been widely assumed when it broke out ('short-war illusion'; e.g. Farrar, 1973). If the coming of the war and, consequently, its impact on public finances, had been expected, these adjustments, we can argue, would have been smaller, since much of the increased country risk would have already been factored into prices.

Did investors in London and elsewhere actually ignore basic political facts? According to Ferguson (2006), they did not. Financial markets were generally well integrated on the eve of World War One – that is, the major and minor powers that would eventually fight the war were as interlinked financially and economically, as they were interlinked in the international system of alliances (e.g. Obstfeld and Taylor, 2003). Against this background, a great conflict seemed to be highly unlikely, as it constituted too high an economic risk. Looking at the long-term

development of the major powers' sovereign bond spreads in London in the decades prior to 1914, Ferguson puts it this way: "The yields on the bonds of the other great powers, which accounted for about half the foreign sovereign debt quoted in London, declined steadily after 1880, suggesting that political risk premiums were also falling. Before 1880, Austrian, French, German, and Russian bonds had tended to fluctuate quite violently in response to political news; but the various crises of the decade before 1914 – such as those over Morocco and the Balkans – caused scarcely a tremor in the London bond market." (2008, p. 443).

The first news in the London market as to the potentially harmful effects of the latest political crisis on the international financial system, based on Archduke Ferdinand's assassination (28 June 1914), dates from 22 July 1914 (Ferguson 2008, p. 445). So investors, as well as the financial press in London, had good reason to believe that financial ties would prevent the European Powers from eventually going to war. The evidence from bond prices of the Paris, Berlin, and Amsterdam marketplaces fit this picture.

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