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Turning Points during the US Civil War: Views from the Grayback Market

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Abstract

This paper introduces a new high frequency time series of Confederate money prices taken from the newspapers of Richmond and leading cities in the Eastern Confederacy. The new Grayback series is tested for “turning points.” The empirical analysis suggests that “turning points” in the Confederate Grayback market were different from those identified in the Union Greenback market by Willard *et al.* (1996). It appears that war did not always have symmetric effects on Northern and Southern money prices.

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“Financial and commercial matters fluctuate under the successes and reverses of the war like ebb and tide, and it is not to be wondered that under the great military events that are now transpiring [Gettysburg], there should be a suspension of operations in trade.”
(*Richmond Examiner*, July 9, 1863, p. 1)

I. Introduction

Recent studies of Civil War financial markets have largely focused on the role of war news in asset price determination. The ‘news’ literature on Civil War asset prices largely centers on the pioneering work of Wesley Mitchell (1903). In his famous book, *A History of the Greenbacks*, Mitchell argued that the Greenback price of gold fluctuated in response to news that changed expectations regarding a return to specie convertibility. War, fiscal, and political news moved the price of Northern paper money rather than changes in money supply and money demand. Willard, Guinnane, and Rosen (1996), hereafter WGR, identify “turning points” in the time path of Union Greenback prices.¹ Their analysis indicates that some events seen as important to modern day historians of the Civil War, such as Gettysburg, were important turning points. They also found that some events given little attention in today’s history books, like General Early’s advance on Washington in July 1864, were also important turning points. WGR interpret their findings as evidence that the methodologies traditionally used by historians (i.e., letters, diaries, etc.) do not always lead to an accurate assessment of how contemporaries viewed the past.

One weakness of the literature on Civil War financial markets has been the poor quality of data from Confederate gold markets. The absence of a high quality Grayback series has made it difficult to compare how investors in the North *and* South reacted to events of the Civil War. This paper introduces a new series of Confederate gold prices taken from the newspapers of

Richmond and leading cities in the Eastern Confederacy. An exhaustive search of more than a dozen primary newspapers yields a gold series of nearly 500 observations during the course of the Civil War (Figure 1). A new series of weekly Grayback money prices is tested for turning points. The empirical analysis suggests that turning points in the Grayback market were different from those identified in the Union Greenback market (WGR, 1996). Overall, the findings suggest that investors in the North and South reacted differently to events of the Civil War.

The paper begins with a review of recent studies on asset price determination in the Southern Confederacy. The new data set is described and compared to existing series on Grayback prices. This is followed by a turning point analysis of the new money series. Breaks in Grayback prices are then compared to those in the Greenback market. The paper concludes with a discussion of the implications of the findings for future studies of the American Civil War, and for war finance in general.

II. Previous Studies of Asset Prices in the Southern Confederacy

Mitchell hypothesized that Greenback prices during the Civil War fluctuated in response to news that changed expectations regarding a return to specie convertibility. In a similar fashion, Schwab (1903) examined movements in Grayback prices. He noted that Confederate money prices also seemed to mirror Confederate fortunes on the battlefield. Schwab chronicled how Grayback prices rose and fell with Confederate military triumphs and defeats. The view that Grayback price movements largely reflected Southern perceptions of the war is supported by

contemporaries of the period. E. A. Pollard, editor of the *Richmond Examiner*, characterized Graybacks as the “sinews of war” (Pollard, 1994, p. 415).

Recent studies of Grayback prices have examined the role of ‘news’ in asset price determination using time series econometrics. Davis and Pecquet (1990) were unable to reject the hypothesis that Confederate money prices contain a unit root, providing empirical evidence that Graybacks followed a random walk. The presence of a stochastic trend in Grayback prices supports the view that Confederate money prices fluctuated in response to news that changed expectations regarding a return to specie convertibility. However, Davis and Pecquet’s study was limited because Grayback prices were not available for the first and last years of the war.

Burdekin and Langdana (1993) looked at the relationship between war news and Lerner’s Price Index, a monthly measure of prices based on 20 commodities taken from newspapers of major cities in the Eastern Confederacy. They plotted commodity inflation on a graph and associated price movements with war news. They concluded that war news was a proxy for the future values of money and debt issues by the Confederate government. War news was an instrument for fiscal news and therefore an important determinant of the Confederate price level.

McCandless (1996) employed a semimonthly series of Grayback prices to examine the impact of war shocks on *short-run* changes in Union and Confederate money prices. His analysis suggests that war news was the single most important determinant of currency prices during the Civil War. Battles proxied for future money financing by the Northern and Southern governments. Military engagements are assumed to emit a common symmetric signal such that a Northern victory (defeat) causes an appreciation (depreciation) in Greenback prices and an equal depreciation (appreciation) in Grayback prices.

More recent studies of Confederate asset prices during the American Civil War have focused on the impact of war news on Confederate cotton bond prices trading in London. Brown and Burdekin (2000) estimate turning points in cotton bond prices. Although their analysis is limited by a relatively small sample size (109 observations), their results indicate that Atlanta was a turning point not found in WGR's analysis of Union Greenbacks. They argue that the more than doubling of Confederate cotton bond prices between December 1863 and September 1864 can be largely attributed to two factors: the slow pace of Union advances during the first nine months of 1864 and the possible election of McClellan as President of the United States on a peace party ticket. They conclude that war did not always have symmetric effects on Union and Confederate asset prices. Weidenmier (2000) analyzes movements in the cotton bonds with a vector autoregression. His results suggest that the large rise in Confederate cotton bond prices during 1864 can be explained by a rise in the price of cotton. Weidenmier's findings indicate that cotton, not war news, was the most important determinant of bond prices.

III. Graybacks and the Richmond Gold Market

As noted above, the seemingly poor quality of Grayback price data has limited previous studies of Confederate gold markets. Researchers have either analyzed monthly Grayback prices or relied on higher frequency data from secondary sources of unknown origin. McCandless' (1996) analysis of Union and Confederate money prices, for example, utilized a semimonthly series of Grayback prices taken from an unidentified newspaper clipping glued to the back of a library book. This is unfortunate because a much richer gold series can be obtained by examining Richmond market reports in local newspapers and nearby cities in the Eastern Confederacy.

An extensive search of more than a dozen newspapers indicates the presence of a liquid money market where investors speculated on the Grayback price of a gold dollar in the Confederate capital. Primary sources yield a series of 486 Grayback price quotations from public auctions and private brokerage trades between May 27, 1861 and February 15, 1865 (Figure 1). All quotes are taken from Richmond except during some stretches in the summer and fall of 1864 when Richmond newspapers stopped reporting money prices. These periods are filled in by gold price quotations from the nearby Wilmington, NC money market, whose prices were often quoted in the Richmond newspapers.² Multiple price quotes are generally available for most weeks of the war and trading volume also appears to have been quite high in the Richmond exchange. The *Richmond Whig* reports trades totaling \$4,900 in gold coin on January 22, 1864, \$2,500 on March 24, 1864, \$2,000 on September 1, 1864, and \$1,150 on November 11, 1864. Investors apparently continued to actively trade Graybacks and gold into the early stages of 1865. The *Petersburg Express* reported January 23, 1865 that over \$1,000 in gold coin exchanged hands “on Monday morning last (p. 1).”

The new Grayback series reveals many discrepancies with the data employed by McCandless (1996) and other secondary sources. The series employed by McCandless (1996) as well as another published in the *New York Evening Post* - also of unknown origin- often report constant Grayback prices for weeks or even months.³ Both price series give the false impression of an inactive and illiquid Confederate money market. On the contrary, as noted above, the Grayback traded regularly with significant fluctuations over short time intervals. Second, it is not clear whether the Grayback series employed by McCandless are bid, ask, or transactions prices. The McCandless series also continues to quote Grayback prices after the fall of Richmond in April 1865. It seems unlikely that there would be any market transactions at this

point in time. Indeed, a search of primary newspapers in Richmond and the surrounding areas fails to uncover any Grayback trades whatsoever during this period. The evidence suggests that it is difficult to accept the results from previous studies of the Grayback market that employ semimonthly data of dubious quality.

IV. Turning Points in Grayback Prices

This paper aims to estimate turning points in Confederate Grayback money prices. A weekly price series of 195 observations covering May 27, 1861 to February 15, 1865 is constructed from the full sample (486 observations) of Grayback prices (see Table 1).⁴ A weekly series is employed in the empirical analysis because Graybacks did not trade every day. By combining trading data over the week, one avoids a nonsynchronous trading problem, producing more reliable statistical results.⁵ Although Grayback prices are not available at the daily frequency of Union Greenback prices, this new weekly price series is almost twice as large as the semimonthly series employed by McCandless (1996). The new Grayback price series can then be used to estimate turning points that can be compared to those identified in the Union Greenback market by WGR (1996). This provides new insight into how investors in the North *and* South perceived events of the Civil War.

The new Grayback series is tested for turning points using a procedure developed by Brown and Burdekin (2000). This methodology is a variant of the technique employed by WGR (also see Banerjee *et al.*, 1996), necessarily modified to account for weekly data. The following equation is estimated to identify breakpoints in Southern money prices.

$$\ln p_t = \beta_0 + \beta_1 \ln p_{t-1} + \varepsilon_t, \quad (1)$$

where p_t is the natural logarithm of the Grayback price of a gold dollar at time t , β_0 is a constant, p_{t-1} is the natural logarithm of the Grayback price of a gold dollar lagged one-period, and ε_t is the error term at time t . Equation (1) is estimated over each 12 week sub-sample that is the approximate size of a “window” (100 days) employed in WGR’s analysis of daily Union Greenback prices. For example, equation (1) is estimated over the first twelve-week period, June 7, 1861 to September 1, 1861. An R^2 is calculated and retained from this regression. The sample period is then moved forward one week, dropping the first week of the sample, June 7, 1861, and adding the thirteenth week, September 8, 1861. An R^2 is then saved from this second regression. The analysis continues in this fashion until R^2 ’s from all 184 twelve-week intervals have been estimated.⁵ The R^2 ’s from each “window” are then plotted on a graph and used to identify periods where a structural break was most likely to have occurred. A low R^2 value indicates a poor statistical fit and suggests the possibility of a turning point. A plot of the R^2 ’s from the empirical analysis, presented in Figure 2, suggests that there are six possible turning points: late November to early December 1861, September to October of 1862, February to March of 1863, late July to early September 1863, late February to March of 1864, and late April to early June 1864.

The next step in the empirical analysis is to test for the presence of a turning point within each twelve-week window where there was a potential breakpoint. Equation (1) is augmented with a dummy variable and each window is expanded to fifteen weeks on either side of a potential breakpoint. Each 31 week window is sequentially estimated with a rolling dummy variable that takes a value of zero prior to that particular week in the window and a value of one

for all weeks that follow. Turning points are identified by the maximum t-statistic, in absolute value, on the rolling dummy variable for each 31 week window. As noted by Brown and Burdekin (2000), the 31 week sample is substantially smaller than the 150 day sample employed by WGR, reducing the power of the test in detecting turning points in Grayback prices.

The empirical analysis identifies 4 turning points that are plotted in Figure 3.⁶ Table 2 presents a list of Grayback turning points that are followed by those identified in WGR's analysis of Union Greenbacks. The first turning point, October 17, 1862, occurs with the Confederate defeat at Sharpsburg (Antietam). The second breakpoint coincides with the passage of the Union Finance and Conscription Bills. This is followed by a Gettysburg turning point that also shows up in WGR's analysis of Greenback prices. The final turning point appears to have averaged the impact of two breakpoints brought on by the Confederate Currency Reform Act of 1864 and battles in Virginia at Spottsylvania and the Wilderness.

The first and third turning points, Antietam and Gettysburg, correspond to breakpoints identified in WGR's analysis of Union Greenbacks.⁷ The existence of common shifts with these two major events provides a special opportunity to examine how Grayback and Greenback investors reacted to important war news. Table 2 indicates that Confederate and Union monies depreciated following the Southern defeat at Antietam. As noted by modern historians, this bloody battle not only halted Lee's Northern Invasion but was crucial in keeping foreign powers from coming to the aid of the Confederacy (Catton, 1965, 1971). The depreciation in the Greenback is inconsistent with McCandless' (1996) argument that war is a symmetric process (i.e., what is good for one side is necessarily bad for the other). WGR interpret the rise in the gold premium as an indication that Antietam/Emancipation Proclamation put an end to the notion that the Civil War would be short-lived. Rather, the Civil War would be a long and

expensive conflict that would call for additional issues of Greenbacks, delaying a return to specie convertibility. Antietam appears to have revised investors' forecasts of the future cost of the war, producing a rise in the gold premium in the Northern money market. The depreciation in Greenback and Grayback prices alike following Antietam suggests that war can have asymmetric effects on money prices if both sides view a battle as increasing the cost of the war.

The results also indicate that Gettysburg did have symmetric effects on money prices. The Grayback depreciated 20% following news of the Confederate defeat at Gettysburg, while the long-run appreciation in the Greenback was estimated to be 31.2% (for a 12 week interval). The existence of a Gettysburg turning point in the Grayback and Greenback markets indicates that both sides recognized the importance of the battle. Gettysburg, like Antietam, was a major military event that fundamentally changed how investors viewed the fortunes of the North and South.

Another striking feature of Table 2 is that Confederate turning points at Antietam and Gettysburg occur much later than breakpoints identified for these same battles in the Union Greenback market. This might be because war news reached the Union Gold Room well before Confederate investors were informed. A reading of Richmond newspapers supports this interpretation. Although the Union Gold Room has been described as a "quicker messenger of successes and defeats than the tardier telegrams of the Associated Press" (Medberry, 1870, p. 214, also quoted in WGR, 1996, p. 1004), the same can not be said of the Richmond gold exchange. Contemporary newspapers indicate that the Confederate government censored war news, especially after costly defeats at Antietam and Gettysburg. For example, news of the fall of Vicksburg was announced in the Richmond gold market before the defeat of Gettysburg. This is quite surprising considering that Vicksburg was located hundreds of miles to the west and fell

the same day Lee's army began its retreat from Gettysburg. A reporter for the *Richmond Dispatch* alluded to the government's censorship of war news regarding Gettysburg in an article written 10 days after the battle:

We have no official account of the battle Gettysburg, although we should think that the authorities must surely have received one before this...The battle of Gettysburg was a triumphant success-an overwhelming victory. We beat the enemy on all three of the days...That he [Lee] was repulsed in his attack on the entrenchments- that he fled in disorder- that his army was demoralised-are Yankee lies of the first magnitude. (*Richmond Dispatch*, July 13, 1863, p. 1)

It appears that the Confederate government intentionally blocked the dissemination of bad war news about the critical loss suffered at Gettysburg. As a result, it was probably difficult for traders in Richmond to make informed forecasts about the future price of Graybacks. However, the government could only keep the public misinformed for a limited time. As more news reports arrived in the Richmond market, it became clear that Gettysburg was a costly defeat for the South. The Grayback depreciated nearly 20% between July 10 and July 17, 1863, highlighting the close link between money prices and Southern fortunes on the battlefield.

The remaining Grayback turning points do not match breaks in Union Greenback prices. The March 7, 1863 breakpoint coincides with the passage of the Finance and Conscription Bills by the United States Congress. The Finance Bill authorized a new issue of \$150 million Greenbacks for war finance. The Conscription Act called for the enlistment of all males between the ages of twenty and forty-five for a period of three years. The draft law potentially provided the United States with 3 million additional soldiers for a period of 3 years. The length of service was probably a signal to Grayback investors of Northern resolve to restore the Union. New York dailies cheered the acts as pieces of legislation that would "bring the Confederacy to its knees" (*Richmond Dispatch*, March 3, 1863). In contrast, the Confederate press seemed shocked that

the United States possessed the fortitude to enact such far reaching measures. Newspaper accounts from the *Richmond Dispatch* suggest that Southerners were surprised by the two measures. Many Confederates apparently did not believe Yankees had the “stomach for war.” In turn, Graybacks depreciated as investors revised their assessment of Union willingness to wage war.⁸

The final breakpoint identified in the empirical analysis, April 22, 1864, appears to take place in between two likely turning points appearing in Figure 2: a major break sometime between February and April 1864 and a smaller break in May. The plot of the R^2 's suggests that the “windows” procedure employed in the empirical analysis has effectively averaged the two turning points. The first break coincides with the passage of the February 17, 1864 Currency Reform Act that reduced the South's money supply by one-third.⁹ The reform took effect April 1, 1864 in the Confederacy east of the Mississippi River. The second break, occurring sometime in mid to late May, can probably be attributed to the battles at Spottsylvania and Wilderness when Lee temporarily halted Grant's advance on Richmond.

The powerful impact of the currency reform in Southern financial markets is perhaps best illustrated by comparing the time path of Grayback prices in Richmond with those in Houston, where the reform was scheduled to take place three months later on July 1, 1864. Burdekin and Weidenmier (1999) show that the Richmond and Houston gold markets were cointegrated until the Currency Reform Act of 1864, even though the surrender of Vicksburg in July 1863 split the Confederacy in half. After April 1864, Grayback prices in Richmond and Houston diverge. Grayback prices in Richmond stabilized for most of 1864 while Graybacks in Houston continued to depreciate. The rise in the gold premium in Houston, but not Richmond, stems from the fact that monetary authorities in areas west of the Mississippi River were largely unable to carry out

the provisions of the reform during 1864. New currency could not be transported across the Mississippi River, meaning that old Grayback currency remained the predominant medium of exchange in Houston throughout 1864. Consequently, old Grayback prices in Houston provide an opportunity to carry out a natural experiment; what would the Grayback price of gold been in Richmond if there was not a monetary reform? By November 1864, old Graybacks in Houston traded at prices of 50 for 1 (gold dollar) while new currency in the east was quoted at prices of 28 to 1 (gold dollar). The divergence of currency values in the east and west persisted for the remainder of the war, even after Western authorities exchanged old money for new, illustrating the importance of the Currency Reform Act in Southern financial markets.

Confederate authorities ultimately repealed the 33% tax on money balances in late December 1864. The empirical analysis failed to uncover a turning point during this period. This is not very surprising considering that the reform's repeal occurred at the end of the sample where trend break analysis has low power.¹⁰ Nevertheless, the Grayback depreciated approximately 25% between late December 1864 and the first week of January 1865. This suggests that both the implementation and repeal of the Currency Reform Act were major events in Confederate financial markets.

V. Conclusion

This paper introduces a new high frequency time series of Grayback money prices. The new data set is tested for turning points that are compared to those identified in the Union Greenback market by WGR. Like WGR's analysis of Greenback prices, the results suggest that there were only a few events that can be classified as turning points based on the actual financial

market decisions of the day. In accordance with modern day historians, the analysis suggests that Greenback and Grayback investors recognized the importance of Gettysburg and Antietam as pivotal events of the war. The existence of common shifts with these particular battles offers insight into how investors interpreted battles of the Civil War. The results indicate that Grayback and Greenback investors viewed Antietam as a crucial turning point that ended the prospect of a short war. In turn, both Graybacks and Greenbacks depreciated as investors increased their estimates of the future cost of the war. Gettysburg, on the other hand, had a symmetric impact on Civil War money prices. Financial market participants from both sides saw Gettysburg as a turning point that increased the North's victory prospects while dealing a crushing blow to the Confederacy.

As for the other breakpoints, it appears that Northern and Southern investors reacted differently to news. An empirical analysis of the Grayback market did not uncover turning points with Early's attack on Washington in July 1864, rumors of a peace conference, or with the proposal to increase the supply of Greenbacks by \$150 million in January 1864 (Table 2). Instead, the results suggest that Grayback investors reacted negatively when the United States passed legislation authorizing the conscription of 3 million men and the issue of 3 million additional Greenbacks, anticipating its negative implications for the Confederacy's chances of survival. The Confederate Currency Reform Act and Wilderness/ Spottsylvania –to a lesser extent- also appear to have been major events in Southern financial markets. Overall, a turning point analysis of Grayback money prices, combined with WGR's analysis of Greenbacks, suggests that Northern and Southern investors reacted differently to events of the Civil War and that war news did not always have symmetric effects on Civil War money prices.

Endnotes

1. Smith and Smith (1997) also provide an analysis of Union Greenback prices using a stochastic switching model augmented with dummy variables to isolate the impact of important news events given by Mitchell (1903). Their analysis indicates that these events can account for 17% of the total variation in wartime money returns.
2. All prices are taken from the Richmond gold market except during the summer and fall of 1864. Newspapers from Petersburg, VA, Raleigh, NC, Lynchburg, VA, Mobile, AL, Wilmington, NC, Augusta, GA, Columbus, GA, Charleston, SC were also examined for price quotes from the Richmond market (see Notes to Table 1). Often these papers would quote trades not reported in the Richmond newspapers. In addition, secondary markets existed in most of these cities, although these gold exchanges tended to be considerably less liquid than the Richmond market. A comparison of gold price quotations across cities in the Eastern Confederacy indicates that the precious metal markets were well integrated. Price spreads between the different markets were generally very small.
3. The Grayback series employed by McCandless (1996) and the price list appearing in the *New York Evening Post* are not even consistent with each other. For example, the latter reports the Grayback price of a gold dollar at 34 for 1 on January 1, 1865 while the former list the price at 60 for 1 on the same date. There are many discrepancies between the two prices series, especially late in the war. This suggests that neither price list provides a fair representation of the time path of Grayback money prices during the war.
4. Ask prices (the price at which brokers sold gold at auctions and private trades) are used to construct the weekly Grayback series. These are the prices most frequently quoted in the newspapers. Ideally, one would like to form a Grayback series using an average of bid and

ask prices. Although some bid-ask prices are available, there are not enough to form a complete price list. To maintain consistency, ask prices were used to construct the Grayback price series. The use of ask prices introduces some “noise” into the data set, but the new Grayback series is still of undoubtedly higher quality than currently existing series.

5. As discussed by Brown and Burdekin (2000), the R^2 analysis and the 12-week windows are equivalent to the first two steps in the procedure utilized by WGR. However, unlike WGR, formal F-tests are not applied in the empirical analysis because the underlying distribution of the test statistics is unknown in small samples (12 week windows).
6. An exploratory analysis was also carried out using all available Grayback price quotations. These results confirm the results using the weekly data, the only difference being that the turning point might have fallen two or three days before or after the break identified in the weekly series. The results using every observation are available from the author by request.
7. It is impossible to separate out the effects of Gettysburg and Vicksburg on Union Greenback prices because news of the two battles arrived at approximately the same time in the Gold Room. However, in the case of the South, news of the fall of Vicksburg reached the Richmond market days before news about the battle of Gettysburg. This is discussed below in the forthcoming analysis.
8. It is interesting to note that there is not a Greenback turning point associated with the Finance and Conscription Bills. Perhaps Greenback investors saw the positive aspects of this legislation offset by it being a signal of a more costly, extended conflict.
9. For a detailed discussion of the provisions of the Confederate Currency Reform Act of 1864, see Pecquet (1987). Lerner (1954, 1955, 1956) also describes the impact of the Currency Reform Act in the Eastern Confederacy.

10. There is also a large appreciation in Grayback money prices that occurs in mid to late January 1865 (see Figures 1 and 3). The decline in the gold premium is unexpected at this late stage of the war, given the South's unfavorable military situation. The appreciation appears to follow from the sale of large gold stocks by the Confederate government (see Morgan, 1985).

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Table 1
The Grayback Price of a Gold Dollar

Date	Price	Date	Price	Date	Price
<i>1861</i>		November 8	1.20	April 18*	1.76
May 31	1.12	November 15	1.20	April 25	1.80
June 7	1.10	November 22	1.20	May 2	2.00
June 14	1.12	November 29	1.25	May 9	2.00
June 21	1.10	December 6	1.30	May 16	2.00
June 28	1.10	December 13	1.30	May 23	2.00
July 5	1.10	December 20	1.35	May 30	2.00
July 12	1.10	December 27	1.35	June 6	2.00
July 19	1.10	<i>1862</i>		June 13	2.00
July 26	1.10	January 3	1.35	June 20	2.00
August 2	1.10	January 10	1.30	June 27	2.00
August 9	1.12	January 17	1.30	July 4	2.00
August 16	1.12	January 24	1.30	July 11	2.00
August 23	1.12	January 31	1.28	July 18	2.00
August 30	1.12	February 7	1.28	July 25	2.00
September 6	1.12	February 14	1.40	August 1	2.00
September 13	1.15	February 21	1.40	August 8	2.00
September 20*	1.15	February 28	1.50	August 15	2.10
September 27*	1.15	March 7	1.50	August 22	2.30
October 4*	1.15	March 14	1.50	August 29	2.35
October 11	1.15	March 21	1.50	September 5	2.40
October 18	1.15	March 28	1.50	September 12	2.40
October 25	1.20	April 4	1.75	September 19	2.40
November 1	1.20	April 11	1.76	September 26	2.40

Table 1**The Grayback Price of a Gold Dollar**

Date	Price	Date	Price	Date	Price
October 3	2.40	March 13	5.00	August 28	12.00
October 10	2.40	March 20	5.25	September 4	12.00
October 17	2.40	March 27	3.40	September 11	13.00
October 24	2.80	April 3	5.00	September 18	12.50
October 31	3.50	April 10	5.50	September 25	11.50
November 7	3.30	April 17	5.75	October 2	12.50
November 14	3.30	April 24	5.50	October 9	12.50
November 21	3.30	May 1	5.00	October 16	11.50
November 28	3.25	May 8	6.50	October 23	12.50
December 5	3.25	May 15	5.25	October 30	12.50
December 12	3.30	May 22	6.00	November 6	12.50
December 19	3.25	May 29	6.25	November 13	15.00
December 26	3.25	June 5	7.00	November 20	16.75
<i>1863</i>		June 12	8.00	November 27	17.00
January 2	3.25	June 19	8.50	December 4	17.00
January 9	3.05	June 26	8.50	December 11	21.00
January 16	3.10	July 3	8.25	December 18	18.00
January 23	3.20	July 10	7.50	December 25	20.00
January 30	3.05	July 17	10.00	<i>1864</i>	
February 6	3.25	July 24	11.00	January 1	20.00
February 13	3.30	July 31	11.00	January 8	22.00
February 20	3.30	August 7	12.00	January 15	22.00
February 27	3.40	August 14	13.00	January 22	21.00
March 6	4.50	August 21*	13.00	January 29	20.50

Table 1

The Grayback Price of a Gold Dollar

Date	Price	Date	Price	Date	Price
February 5	22.00	July 22**	18.00	<i>1865</i>	
February 12	22.50	July 29**	19.00	January 6	49.50
February 19	22.00	August 5**	18.00	January 13	50.00
February 26	27.00	August 12**	19.00	January 20	66.50
March 4	27.50	August 19**	19.00	February 3	45.00
March 11	22.00	August 26**	20.00	February 10**	45.00
March 18	22.00	September 2	20.00	February 17**	45.00
March 25	21.25	September 9	23.00		
April 1	23.00	September 16	25.00		
April 8	23.00	September 23	25.00		
April 15	26.00	September 30	25.00		
April 22	23.00	October 7**	25.00		
April 29	21.00	October 14**	23.00		
May 6**	21.25	October 21**	23.00		
May 13**	18.00	October 28**	26.00		
May 20**	18.00	November 4	25.00		
May 27**	16.00	November 11	28.00		
June 3**	17.00	November 18	28.00		
June 10**	16.00	November 25	28.00		
June 17**	17.00	December 2	29.00		
June 24**	17.00	December 9	34.50		
July 1**	17.00	December 16	34.75		
July 8**	17.00	December 23**	36.00		
July 15**	17.00	December 30	40.00		

Notes to Table 1

*Grayback/gold price quotations were unavailable for these particular weeks. The Grayback price of gold has been interpolated for these particular dates assuming a constant price from the last available trade.

**Prices were not reported in the Richmond newspapers for these particular dates. The gaps were filled in with Grayback/gold price quotations from the Wilmington, North Carolina money market. All Wilmington gold price quotations are taken from the *Wilmington Daily Journal*.

Grayback/gold price quotations were taken from the following newspapers: *Richmond Dispatch*, *Richmond Examiner*, *Richmond Whig*, *Richmond Enquirer*, *Petersburg Express*, *Wilmington Journal*, *Columbus Daily-Sun*, *Charleston Mercury*, *Lynchburg Virginian*, and the *Mobile Tribune*. Richmond Grayback/gold price quotations were also cross-checked against prices in the Raleigh, Augusta, and Mobile gold markets using the following newspapers: *Raleigh Weekly Register*, *Mobile Tribune*, *Mobile Advertiser and Register*, and *Augusta Daily Constitutionalist*.

Table 2**Confederate Grayback Turning Points vs. Union Greenback Turning Points*****Turning Points in Grayback Money Prices***

Date	Percentage Change in Grayback Price	Significance Level	Major News of the Week
October 21, 1862	-15.22	0.059	Antietam
March 6, 1863	-19.22	0.005	Finance/Conscription Bills
July 17, 1863	-20.44	0.011	Gettysburg
April 22, 1864	9.83	0.051	Currency Reform/Wilderness-Spottsylvania

Turning Points in Greenback Money Prices identified by WGR

Date	Percentage Change in Greenback Price	Long-Run Percentage Change in Price	Major Events
September 23, 1862	-0.44	-8.8	Antietam/Emancipation Proclamation Announced
January 8, 1863	-1.40	-28.0	Proposal to Increase Supply of Greenbacks by \$300 million
July 6, 1863	1.56	31.2	Gettysburg and Vicksburg
August 27, 1863	-0.63	-12.6	Unknown
July 12, 1864	4.80	96.0	Early's army retreats
August 24, 1864	0.40	8.0	Peace Conference Rumors
March 8, 1865	2.60	52.0	Unknown

Figure 1
Grayback Money Prices May 1861 - February 1865

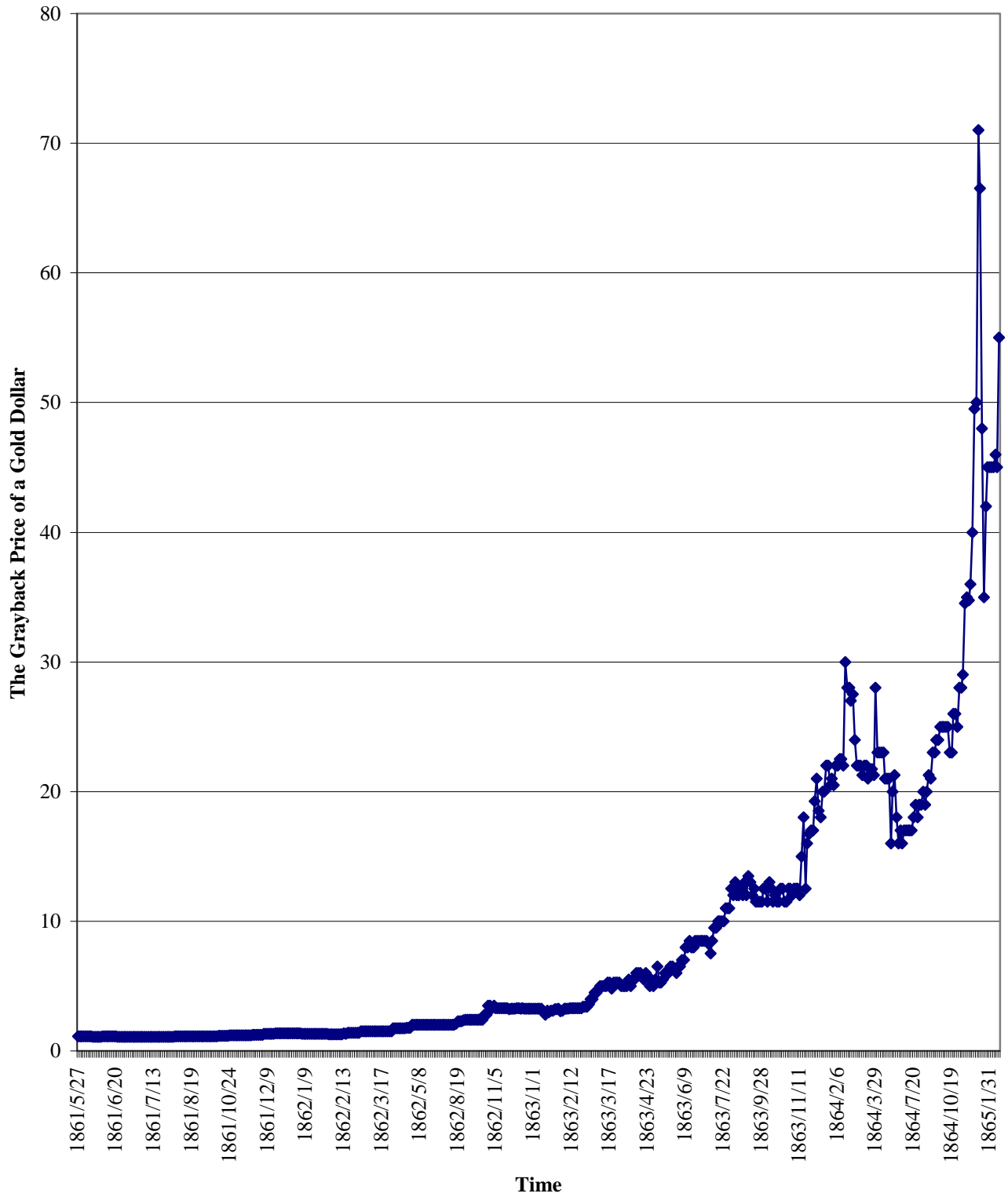


Figure 2
R-Squared Values for Trend Break Analysis of Grayback Money Prices

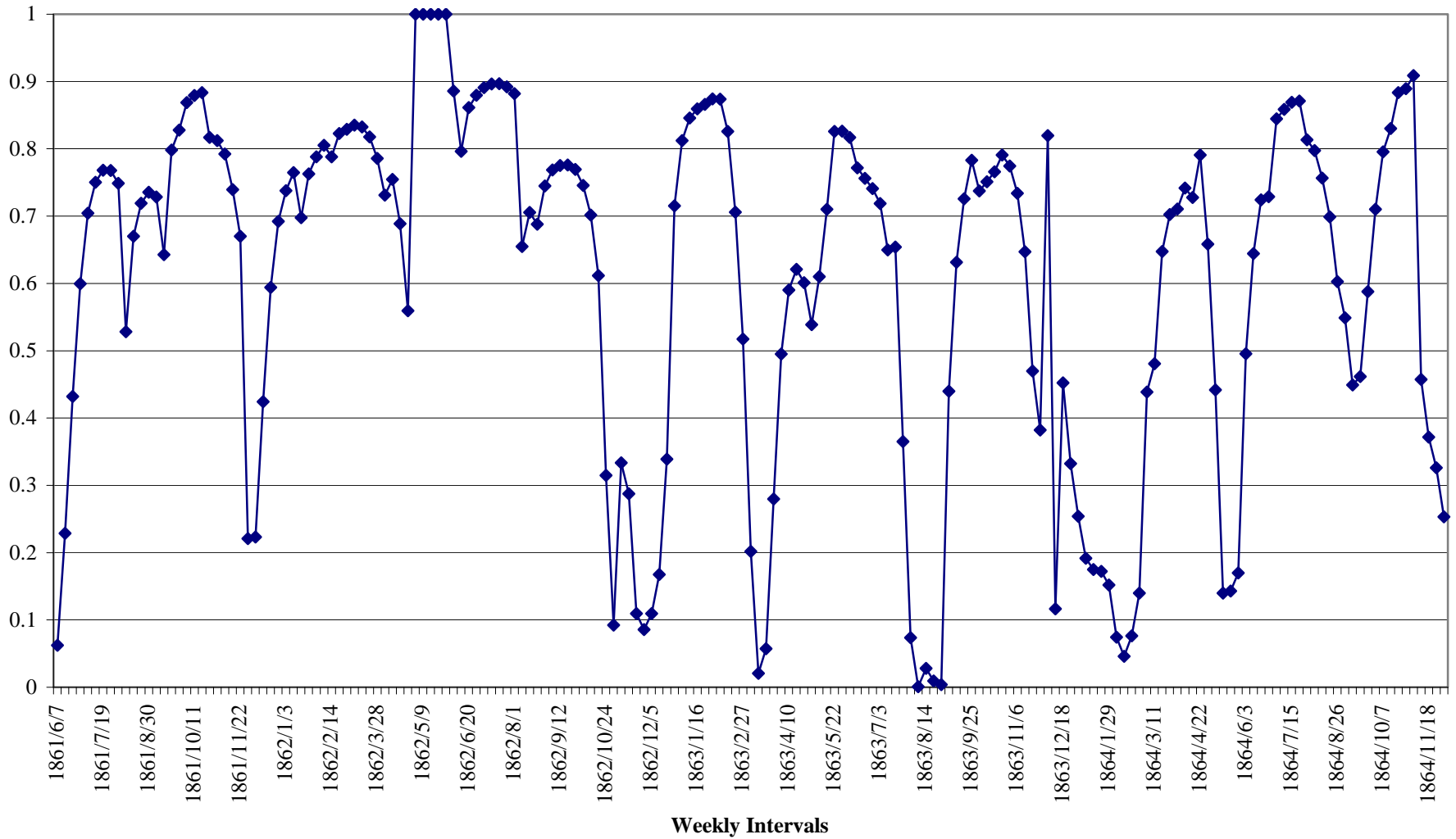


Figure 3
Turning Points in Grayback Money Prices

