Carleton College Department of Economics
Working Paper Series

Dred, *Panic, War: How a Slave Case Triggered Financial Crisis and Civil Disunion*

by Jenny B. Wahl

No. 2009-01

Department of Economics
Carleton College
One North College Street
Northfield, MN 55057
Telephone: (507) 222-4109
Facsimile Number: (507) 222-4044

July 2009

> A single prosperous business session wipes out even the remembrance of past blunders. All is forgotten until another storm comes, and a thunderstroke shatters again the very foundations of our boasted strength and greatness. Our merchants and business men by the hundreds and thousands are now mourning over their folly.
>
> -- *The Independent*, Dec. 24, 1857[1]

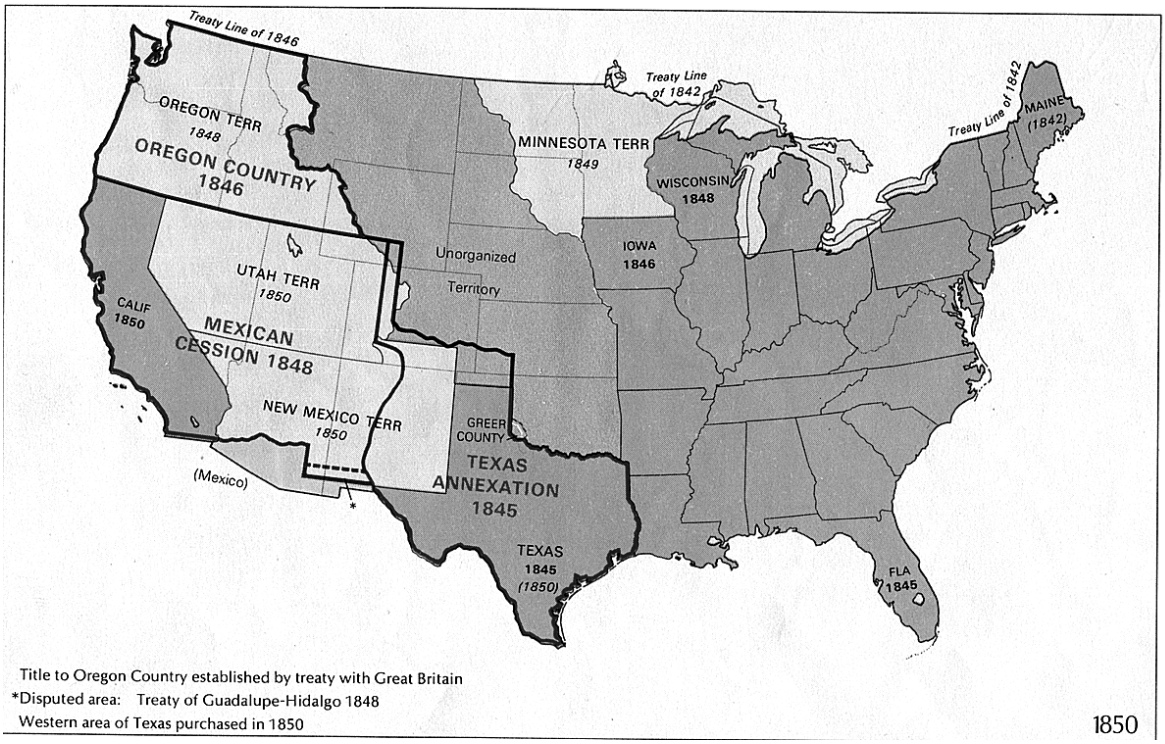
In eerily familiar ways, the financial panic of 1857 prefigures the current subprime mortgage crisis. Then as now, lightly regulated institutions eagerly extended credit based on exciting new financial instruments, speculators assumed that real property values would continue to climb indefinitely, and the reverberations from the inevitable collapse echoed round the world. The words of one pundit seem apt: History repeats itself because nobody listens.[2]

What follows is an account of the panic of 1857, arguably the first truly global financial meltdown that involved multiple interlocking markets and sectors. In their study of the panic, Calomiris and Schweikart (1991) suggest that the trigger may have been the case of *Dred Scott v. Sanford*,[3] although they acknowledge the difficulty of proving this contention. Using a heretofore untapped data source, I find empirical evidence that the case indeed helped set off the crisis – and set the stage for secession. By affirming the value of slave property and undercutting the value of territorial land, Roger Taney's opinion stemmed the tide of migration westward, lowered the worth of investments in western railroads, and created havoc on Wall Street. As *Dred* led to panic, panic led to war. Because the South weathered the financial turmoil relatively better than the North, Dixie's departure from the Union became a more realistic option.

I. SETTING THE STAGE FOR THE IMPENDING CRISIS

A. Geography and Population

Figure 1
The United States in 1850

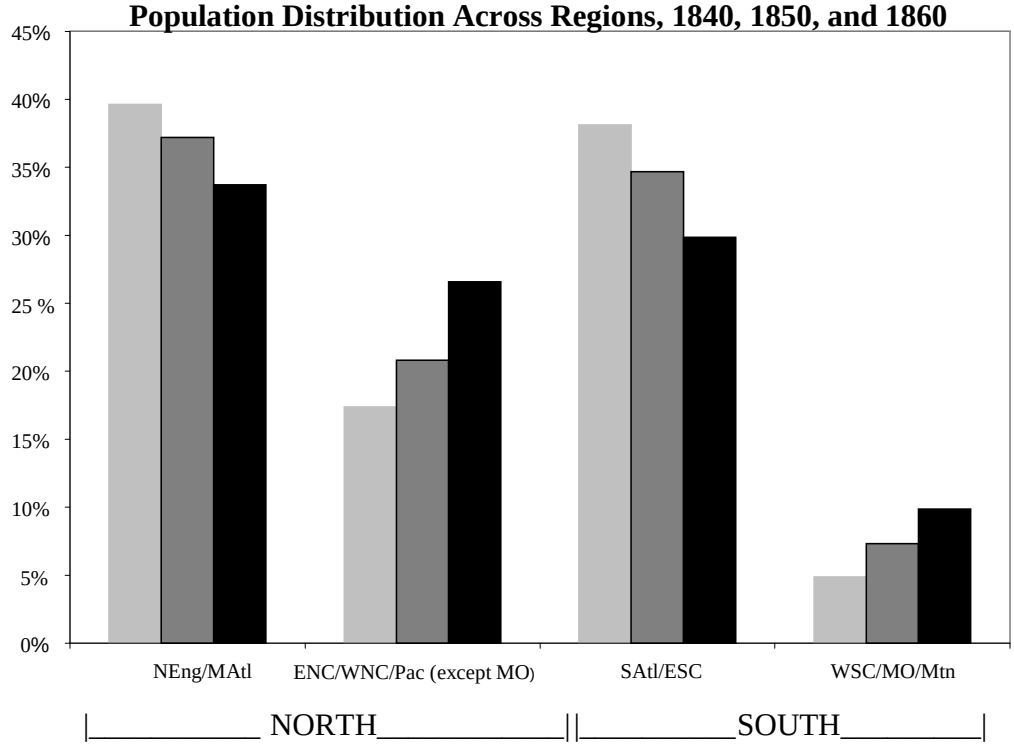


Source: http://teachpol.tcnj.edu/amer_pol_hist/fi/000000aa.htm.

Between 1845 and 1853, huge changes in the geography of the U.S. occurred. As Figure 1 shows, the nation added five states in the first five years of the period, two of which – Texas and California -- also increased actual acreage. The disputed Oregon territory officially became part of the U.S. in 1846, and the treaty of Guadalupe Hidalgo ended the Mexican-American War in 1848, granting the U.S. another large chunk of land. The only remaining portion of the continental U.S. – denoted as "Mexico" on the map above – was the Gadsden Purchase, bought in 1853 in hopes of obtaining a Southern route for a transcontinental railroad.

As the nation's land mass stretched westward, so did its population. People took seriously the admonition to "Go west, young man."[4] Figure 2 shows that settlers migrated west through the 1840s and '50s, both in the North and the South. Steckel (1983) suggests that migration during this time period often took place along latitudinal lines.

Figure 2
Population Distribution Across Regions, 1840, 1850, and 1860

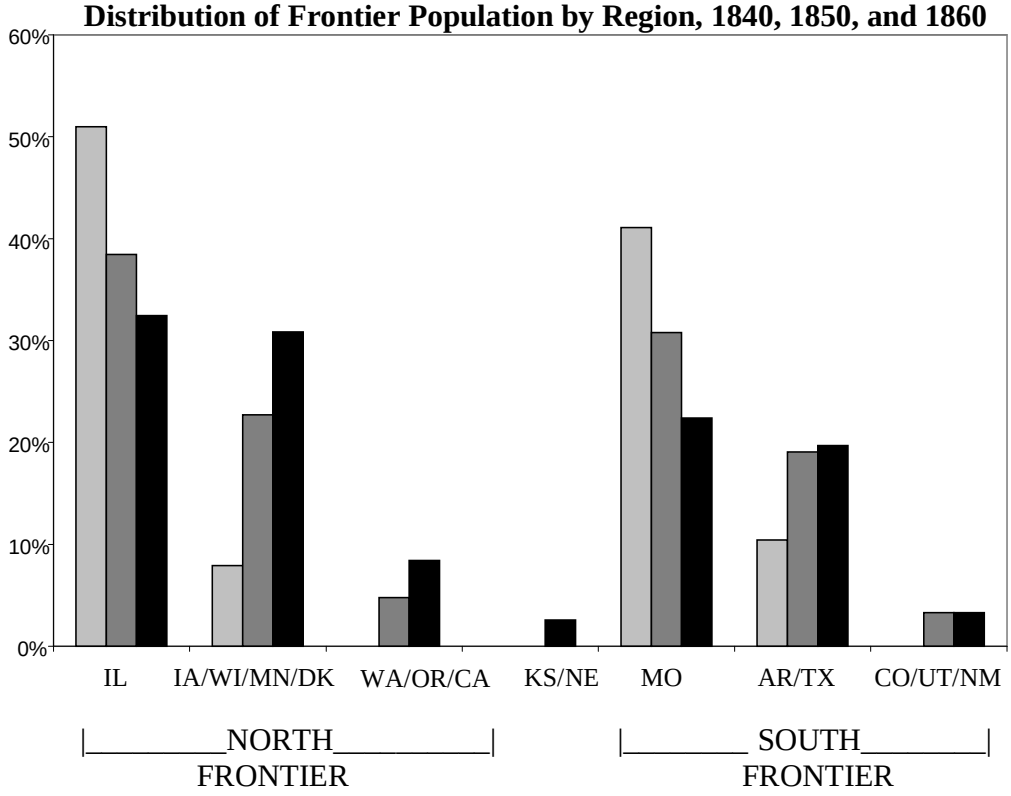


Sources: http://www.census.gov/population/www/documentation/twps0056.html, http://fisher.lib.virginia.edu/collections/stats/histcensus/.
Note: States and territories included in these regions are as follows: NEng/MAtl = Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania; ENC/WNC/Pac (except MO) = Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Dakota Territory, Nebraska, Kansas, Oregon Territory, California; SAtl/ESC = Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi; and WSC/MO/Mtn = Missouri, Arkansas, Louisiana, Texas, Colorado, New Mexico Territory, Utah Territory.

Take a closer look at the nation's frontier areas – Illinois, Iowa, Wisconsin, Minnesota, the Dakotas, the Pacific Northwest, Kansas, Nebraska, Missouri, Arkansas, Texas, and the mountain states -- which contained only 5 percent of the population in

1840 but 17 percent in 1860. Illinois had nearly half a million people in 1840 -- over half of the frontier population – growing to 1.7 million inhabitants by 1860. Missouri was next largest in 1840, with over 40 percent of the frontier population; by 1860 it contained nearly 1.2 million people. Yet, as Figure 3 indicates, frontier areas farther west grew much faster than these two, containing only 8 percent of the frontier population in 1840 but 46 percent in 1860.

Figure 3
Distribution of Frontier Population by Region, 1840, 1850, and 1860



Sources: http://www.census.gov/population/www/documentation/twps0056.html, http://fisher.lib.virginia.edu/collections/stats/histcensus/.

U.S. land policy, particularly the Graduation Act of 1854, encouraged this western movement.[5] Figure 4 shows that people bought huge numbers of acres from public land offices in 1854 and 1855. Much of this land was located in Wisconsin,

Minnesota, and Iowa.[6] Although cash acreage slacked off in 1856, the price per acre remained comparable to per-acre prices in 1854-55.[7]

Figure 4
Number and Price of Cash Acres Entered at Public Land Offices, 1850–1856

Source: Smith and Cole (1935), p. 185.

The secondary market for land was where the real action took place, however. In mid-year 1857, lots in Western cities could pass through the hands of as many as 12 people in 60 days.[8] Kenneth Stampp notes that Omaha property selling for $500 in spring 1856 went for $5,000 in spring 1857.[9] David Mitchell suggests that "[E]verybody in the West had a share of God's Earth, quietly increasing at a rate of perhaps a hundred, or at least twenty per cent per annum – it was hoped."[10]

B. Railroads

Although the increased size of the antebellum U.S. and the concurrent population movements were notable, railroads were the big story of the 1850s, because they

revolutionized securities markets just as they transformed transportation. To understand the Panic of 1857, we must see how railroads fit into the picture.

1. Interaction with Land Markets

Railroads interacted with land markets in the nineteenth century, because they both affected and were affected by the expected value of the land surrounding them. Owners of land could find themselves substantially richer—at least on paper—if a railroad were built nearby. They could transport both themselves and their products cheaper and faster by rail than by wagon.[11] This capitalization of reduced transportation costs into land values meant that savvy speculators did their best to ascertain where railroads were likely to be constructed so that they could buy up neighboring plots. By the same token, railroad managers were on the lookout for locations where people desired to live—a larger population meant more traffic for trains and thus greater potential profits.

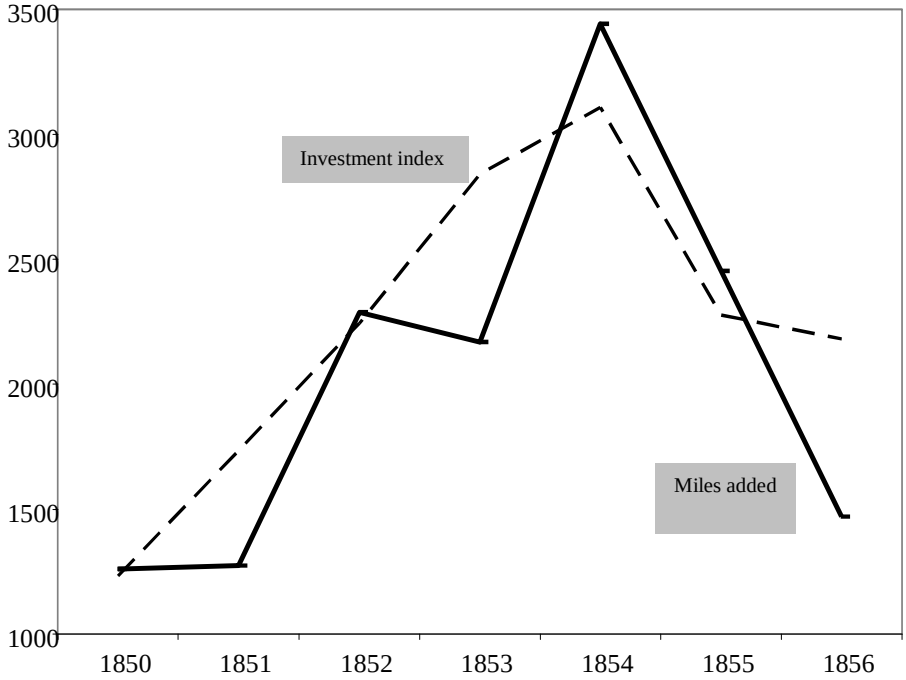
Fishlow offers empirical evidence to support the interwoven nature of markets. More than 60 percent of the railroad construction in Illinois up to 1853 was concentrated in one-fourth of the land area of the state: the 19 leading wheat- and corn-growing counties. Wisconsin displayed a similar pattern. Statistics vividly show that railroad counties in Iowa had much greater population density: overall density was 9.3 persons per square mile in 1850, but typical counties with railroads could boast of 20 to 30 persons per square mile. Three Iowa railroad counties had more than 40 persons per square mile.[12]

2. Historical Growth and Regional Patterns

Although America's great railroads trace their beginnings to the 1830s, rail transport proved fairly insignificant for the first two decades. The Baltimore & Ohio line began in 1830 and the Erie in 1832, but only about a thousand miles of rails existed in 1835. People began to consider railroads as an alternative to canals when the Boston & Lowell Railroad started to divert traffic from the Middlesex Canal. Yet barely nine thousand miles of track had been laid by 1850, mostly in the Northeast, and many routes ran for only short distances.[13] The West contained just 12 percent of rails, all in the old Northwest Territory and primarily in Ohio and Michigan.[14]

The six years from mid-1851 to mid-1857 were frenetic ones for railroad consolidation and building, as Figure 5 indicates.[15] By 1853, people could travel by rail from New York City to Chicago; shortly thereafter, rails connected Chicago to the Mississippi River.[16]

Figure 5
Railroad Investment and Additional Mileage, 1850-1856

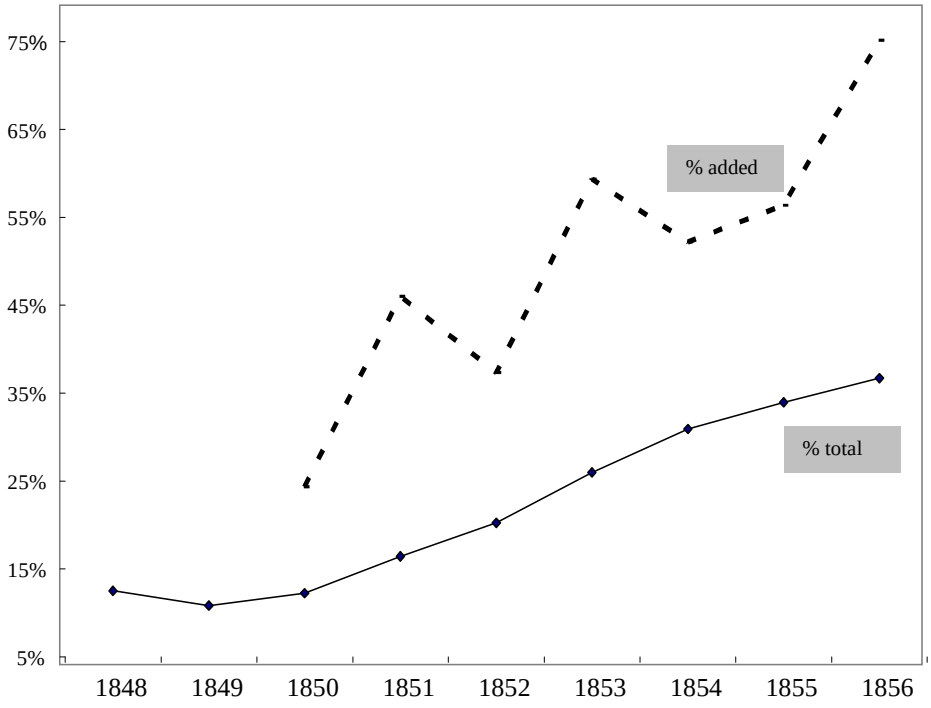


Sources: Wilson and Spencer (1950, p. 339), Stover (1987), p. 317, Fishlow (1965), Tab. 16, *Historical Statistics of the United States*, Millennial Edition (www.hsus.cambridge.org).
Note: Miles are actual miles; the investment index equals gross investment in millions of 1860 dollars multiplied by 30. Constructing the index in this way permits the two series to be graphed on the same set of axes.

Although Figure 5 shows that total investment and mileage began to slow around 1854, the building of western roads was still gathering steam. Perhaps one of the most notable features of the rapid rail expansion of the 1850s what happened in the Northern states near the western frontier. Figure 6 shows, for example, that six states -- Ohio, Indiana, Illinois, Michigan, Wisconsin, and Iowa -- enjoyed fully three-quarters of new track laid in 1856. Illinois acquired as much new track in 1856 as all five states of the old Northwest did in 1850.[17] Early in 1857, workers completed the Milwaukee & Mississippi Railroad, and the Baltimore & Ohio reached St. Louis.[18]

Worth noting is where railroads were not located. As of 1861, the eleven Confederate states had only about one-third of the railroad lines and one-fifth of the employees in the industry.[19] This pattern is easily explained. Because the South was blessed with far more navigable inland waterways, the benefits of railroads were smaller there.[20] What is more, Southerners had an alternative use for their capital – slaves.

Figure 6
Total and Added Rail Mileage in Ohio, Indiana, Illinois, Michigan, Wisconsin, and Iowa as a Percentage of U.S. Amounts, 1848-1856



Sources: Wilson and Spencer (1950), p. 339; Stover (1987), p. 317; Fishlow (1965), tab. 16; *Historical Statistics of the United States*.

3. Land Grants and the Role of the Federal Government

Just as government had a hand in nineteenth-century land markets, so too did it play a part in the nineteenth-century railroad revolution. Starting with a grant to the Illinois Central in September 1850, the federal government gave 131 million acres of

public land to railroads over the following two decades, and Texas (which did not cede its land to the national government upon statehood) donated 27 million acres.[21] Not surprisingly, the relative abundance of railroads in the North was associated with comparatively larger land grants, as Table 1 depicts. The North received more total acreage; land grants as a proportion of total land area (excluding water) were also larger in the North. And acres granted per capita (using total 1850 population) were more than twice as large in the North as in the South. The only comparable North/South figures were acres granted per white person as of 1860; in all other dimensions, the North benefited relatively more from federal land grants to railroads.

Table 1
Federal Land Grants for Railroads, 1850-1857

Years	*Region*	*Acres Granted*	*Grants/ Land Area*	*Grants/1850 white pop.*	*Grants/1850 total pop.*	*Grants/1860 white pop.*	*Grants/1860 total pop.*
1850	Illinois	2,595,133	7.3%	3.07	3.05	1.52	1.52
1856	Iowa	4,507,531	12.6%	23.49	23.45	6.69	6.68
1856	Michigan	3,103,880	8.5%	7.86	7.81	4.22	4.14
1856	Wisconsin	560,605	1.6%	1.84	1.84	0.72	0.72
1857	Minnesota	7,364,269	14.5%	1,219.65	1,211.83	43.47	42.81
TOTAL NORTH		**18,131,418**	**9.4%**	**10.40**	**10.34**	**4.47**	**4.44**
1850–56	Mississippi	1,285,743	4.3%	4.35	2.12	3.63	1.62
1852–53	Missouri	2,438,015	5.5%	4.12	3.57	2.29	2.06
1852–53, 1856	Alabama	3,193,719	9.8%	7.49	4.14	6.07	3.31
1852–53	Arkansas	3,836,595	11.5%	23.66	18.28	11.84	8.81
1856	Florida	2,497,719	7.4%	52.91	28.56	32.13	17.79
1856	Louisiana	699,221	2.5%	2.74	1.35	1.96	0.99
TOTAL SOUTH		**13,951,012**	**6.9%**	**7.84**	**4.85**	**5.16**	**3.30**

Source: Donald (1911), tabs. 1-3, 5; http://www/netstate/com/states/tables/st/_size.htm; http://www.census.gov/population/www/documentation/twps0056.html.

These grants generated even stronger connections among railroads, land markets, and population movements. Railroads attempted to encourage western migration by offering settlers easy credit terms and low downpayments.[22] One advertisement placed by the Illinois Central offered "superior farming lands . . . not surpassed by any in the world . . . for sale on long credit [up to seven years], short credit or for cash" and promised the finest of public schools, excellent health, and the best conditions for any investment.[23]

C. Securities and Financial Markets

Railroads changed the physical landscape in the U.S., but they also reshaped its financial markets. Perhaps the most noteworthy feature of investors in the 1850s was their eagerness to purchase railroad securities and to trust them as collateral, despite a glaring lack of information about their soundness.

Data collected by Richard Sylla, Jack Wilson, and Robert Wright (2002) offer a rare opportunity to track weekly information on securities traded in several different cities during the nineteenth century.[24] The most complete information covering the 1850s come from Baltimore, Boston, Richmond, and New Orleans.[25]

1. The Importance of Railroad Securities

Philadelphia provided the first center for American railroad finance, followed shortly thereafter by Boston, a city that lacked a navigable inland waterway. By the time of the Civil War, New York was the financial capital of the country, although active exchanges operated in many cities, as did curbstone brokers plying their business just

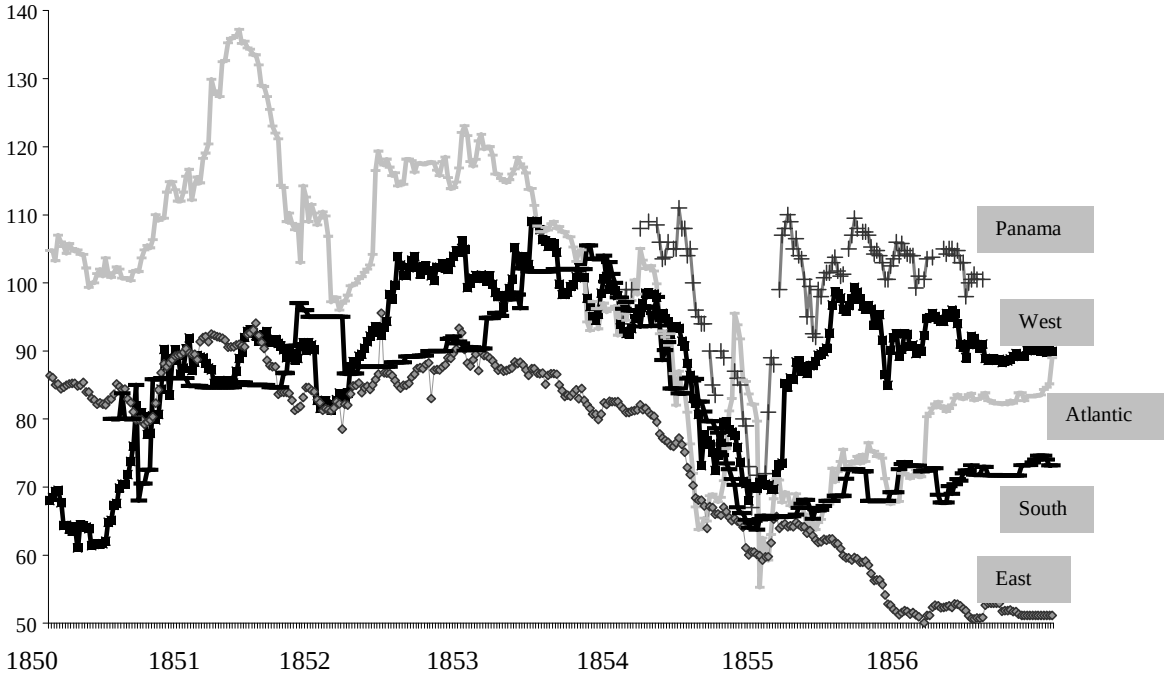
outside Wall Street.[26] By far the most vigorously traded securities were railroad stocks and bonds.[27]

Private investors put up about three-quarters of the more than $1 billion invested in railroads between 1828 and 1860.[28] Holding stock was not always a voluntary event: some railroads demanded that their suppliers take payment in the form of securities.[29] Companies at times also gave stock as a bonus to those who bought bonds.[30] But plenty of people also took a keen interest in playing the market. Minnesotans were so eager to speculate that they had no time for politics (unlike today), and Wisconsin farmers bought up railroad securities using personal notes backed by mortgages on their holdings.[31]

Railroad securities held international appeal as well. Of the total inflow of foreign capital to the U.S. from 1849 to 1860, half went for stocks and bonds issued by railroad companies. The Secretary of the Treasury estimated that foreign investors held $44 million in railroad bonds and $8 million in railroad stock out of a total of $550 million invested in U.S. railroad securities in 1853. The next most popular item in foreign portfolios was state and local bonds and, as discussed below, these often served as backing for railroad operations.[32]

Figure 7 offers summary information on weekly stock prices for railroads located in various parts of the country.[33] Among the most notable features of the figure are the early success of Atlantic roads, the general downward trend in prices of Eastern railway stock throughout the period, and the downward dip in late 1854 followed by price recovery in regions outside the East, particularly for the Western and Panama railroads.[34] Prices remained fairly steady throughout 1856 in all regions.

Figure 7
RR stock indices 1/5/50-12/27/56



Source: Sylla et al. (2002).

The intense interest in railroad securities, particularly stock, was not always based on solid information about fundamentals. Generally accepted accounting principles were unheard of, and few companies offered much in the way of disclosure.[35] The New York Stock Exchange did not require annual financial reporting until 1869 and devoted no resources to enforcing it.[36] As one treatise put it, "[T]here has been no regard for the truth even in the statement of the amounts and sources of capital actually obtained by the corporation. . . . In many instance, shareholders are as uninformed after reading a published financial statement as if none had been rendered."[37] Top management was sometimes incompetent and occasionally venal.[38] Investors in Western roads had virtually no idea how their money was being used or whether lines were even being built.[39] Contemporaneous commentators denounced the growing evil of overspeculation

and the mania for playing the market.[40] The actions of state and local government – described in the next section – merely helped fuel this behavior.

Regional investment patterns varied. Most notable is the difference between North and South: Southern railroads tended to have a greater proportion of local investors and to pay little in the way of dividends. The local angle meant easier monitoring of the use of funds, but it also made for shorter lines and a patchwork combination of different rail sizes in the South.[41] This hampered the South's movement of troops and supplies during the Civil War but it cushioned the impact of financial chaos resulting from speculation based on inadequate information.

2. State and Local Government Involvement in Railroad Finance

Whereas the federal government granted land to the railroads, states and municipalities offered another sort of support: they subscribed to stock and pledged their taxing powers as a guarantee on bond redemption.[42] Because investors were hit heavily by the Panic of 1837, some states began inserting constitutional provisions to limit state debt and aid to corporations in the 1840s.[43] Yet cities, counties, and states remained highly invested in railroad securities through the mid-1850s, particularly in the North.[44]

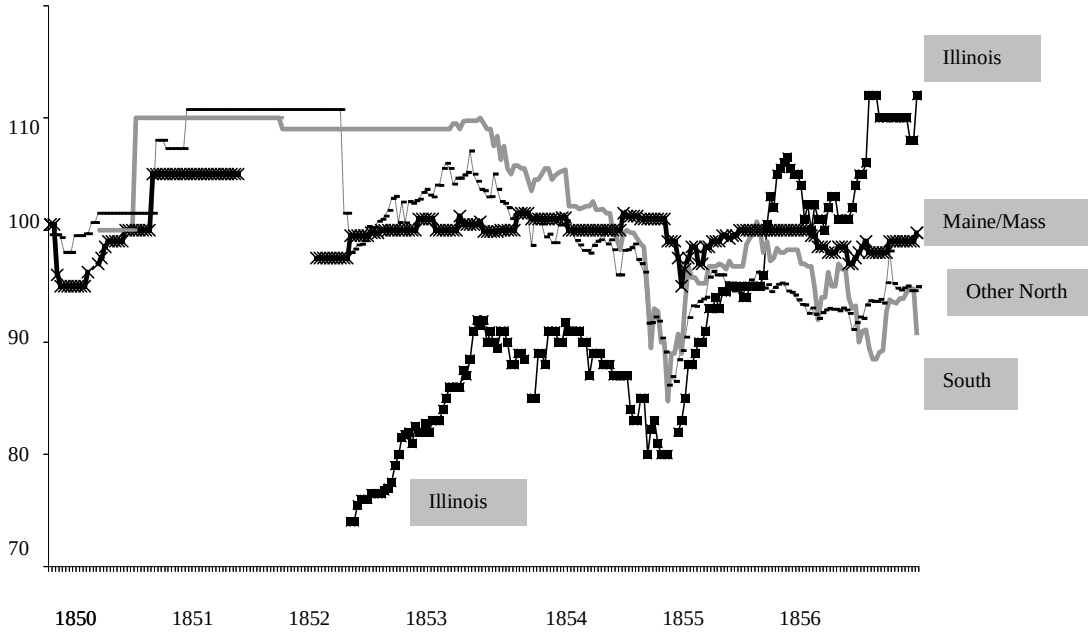
Southern states and cities did offer some aid. Tennessee, for example, awarded railroads $10,000 for each mile of track completed.[45] Bonds issued by the city of New Orleans sold at a huge discount in 1854 because the city had pledged so much aid to local railroads.[46]

Some public officials grew alarmed at these close relationships. After the city of Cincinnati taxed its citizens to buy $1 million of stock in the Ohio & Mississippi

Railroad, Salmon P. Chase, then-governor of Ohio, begged the legislature in his January 1857 message to keep tabs on the railroads.[47] But most public figures seemed happy with, or at least complacent about, the arrangements.

Baskin (1988) argues that the intertwining of public and private interests helped give an aura of legitimacy to railroad investments that they otherwise might not have had.[48] Not only that, the fortunes of states were tied, at least in part, to the fortunes of the railroads. The late-1854 downturn in public-bond prices, shown in Figure 8, mirrors the pattern in private-security prices. Note as well the climb in Illinois state bond prices over the 1852-56 period, just when the Illinois Central line commenced construction.

Figure 8
Bond Prices, Grouped States, 1850-56



Source: Sylla et al. (2002).

3. Banks

a. Northern banking

Banks, state governments, securities and land markets, and railroads formed an intimate network in the 1850s. In this era of free banking, banks could not print their own notes but could obtain state bank notes in exchange for state bonds which, as mentioned, sometimes backed railroad activities.[49] States in turn relied on banks to generate tax revenue and investment income.[50]

What is more, no centralized banking authority existed.[51] Instead, banks in the nation's interior used New York banks to hold their reserves. New York banks then lent these reserves on the call-money market, accepting stock and land mortgages as collateral.[52] This activity escalated in the second half of the decade, leaving banks with far lower specie reserves than before. The ratio of bank specie to total deposits plus notes fell from 22 percent at the beginning of 1855 to only 10.4 percent in February 1857.[53]

This complex paper edifice rested upon a simple assumption: that debtors could pay. Few seem to have contemplated the possibility that everyone might call in loans at once – a classic fallacy of composition. As one contemporaneous commentator put it, using call loans with stock collateral seemed plausible as proposed by each separate bank. But "[t]he causes which alarm one bank alarm the whole. Upon any shock to confidence, they [will] all call in at once."[54]

b. Southern banking

Southern banks engaged in fundamentally different practices than their Northern counterparts. Louisiana's Forstall system, established in 1842, required one-third specie reserves held against notes and deposits, for example.[55] Banks in other Southern states were not quite as conservative but nevertheless were fewer in number, more tightly knit,

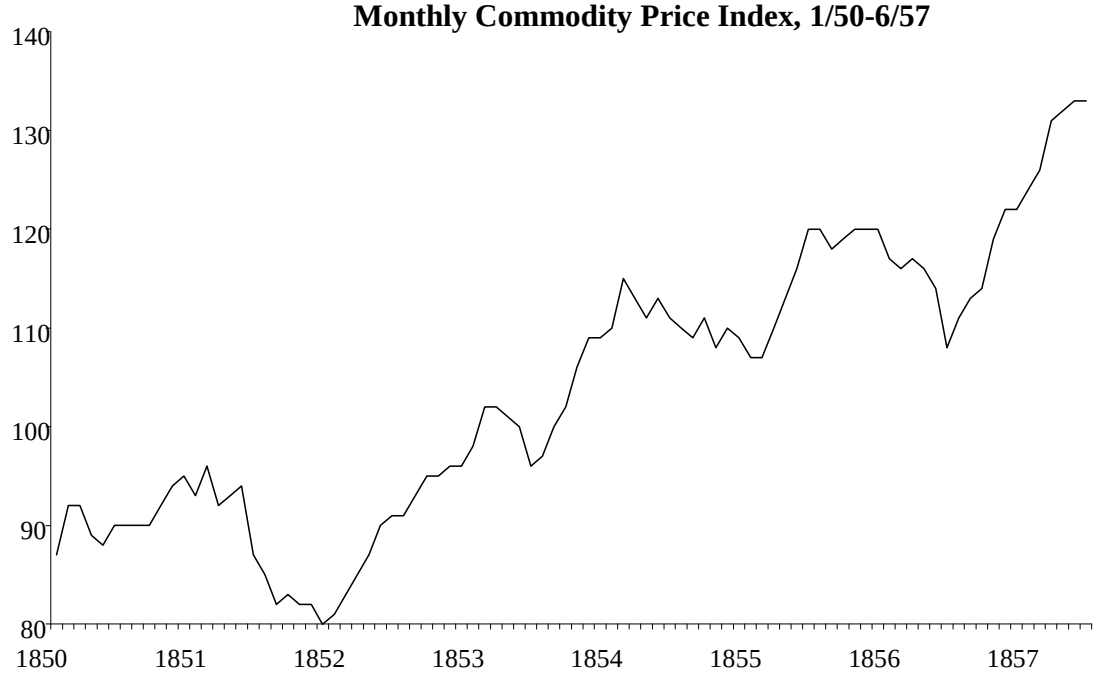
and more focused on solvency than Northern banks.[56] Risk aversion in South, especially after 1850, made borrowing difficult for small proprietors.[57]

A Virginia newspaperman foreshadowed today's critics of subprime rating agencies in an editorial printed in October 1857. He decried the habits of New York banks in estimating the worth of securities without any regard to their intrinsic value.[58]

D. **Commodities and Slaves**

Although land and railroad-security markets were beehives of activity in the 1850s, people found additional outlets for speculation, namely commodities. By midsummer 1857, commodity prices had increased 40 percent over the past four years, as Figure 9 makes clear.[59] This inflation was partly due to the infusion of gold from California.[60]

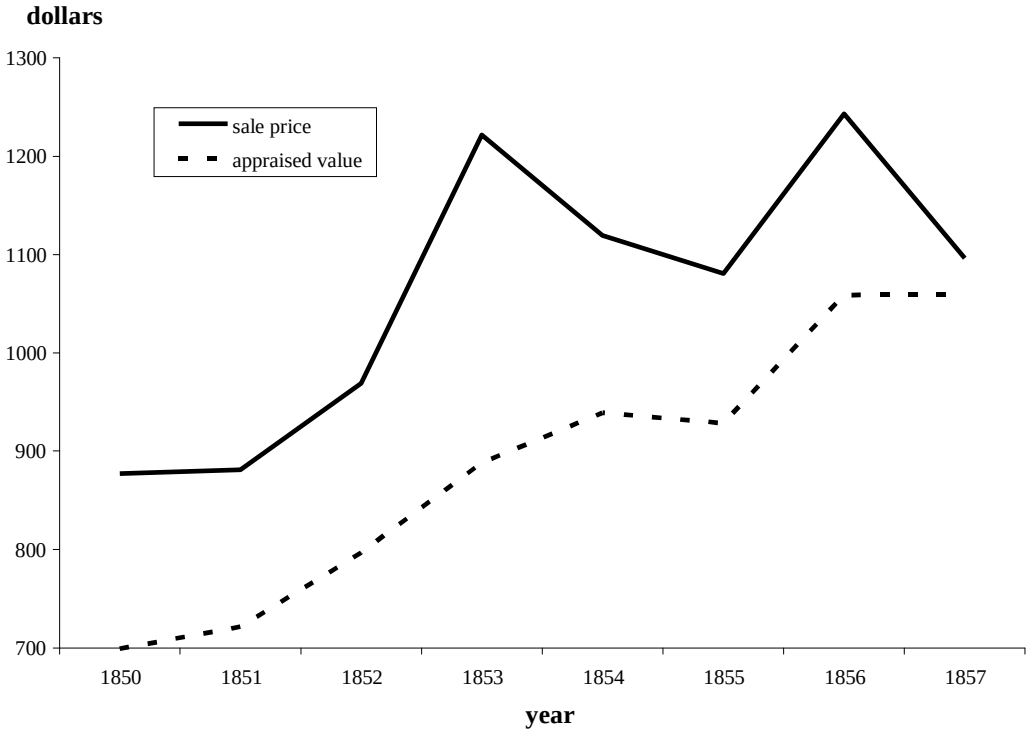
Figure 9
Monthly Commodity Price Index, 1/50-6/57



Source: Smith and Cole (1935), Tab. 52, p. 167.

Slave prices also escalated throughout the period, as Figure 10 shows. The average sale price for a prime-age male went from $877 in 1850 to $1243 in 1856. Mean appraisal values increased from $699 in 1850 to $1058 in 1856.[61]

Figure 10
Mean Values for Prime Male Slaves, 1850-57



Source: Fogel and Engerman (1976).

II. THE CRISIS COMETH

As of late spring 1857, the nation had experienced sharply rising prices for land, railroad securities, and commodities for several consecutive months. Banks, goods traders, securities dealers, land merchants, international investors, government at all levels, and ordinary citizens shared in the largesse, anticipating continuing prosperity particularly from Western concerns. But things fell apart: the center could not hold.

What happened, and why? The following sections offer a brief theoretical explanation of why the panic occurred, followed by copious empirical evidence about both short- and long-run effects.

A. A Theoretical Framework

1. Relevant Models of Financial Panic

Two leading theories associated with financial panics are the random-withdrawal model and the asymmetric-information model. In the first, random withdrawals from banks generate the possibility of panic in a world where depositors are served on a first-come, first-served basis.[62] A surge in the demand for funds, coupled with fractional reserves, means that the first people to arrive at a bank may retrieve their savings but later arrivals may not. I argue elsewhere that this model likely describes the Panic of 1837.[63]

A different theory centers on asymmetric information between creditors and debtors. This alternative models a financial panic starting when holders of bank notes, bank accounts, mortgages, stock certificates, or bonds revise their perception of risk when they receive bad news about the macroeconomy. Because people cannot immediately distinguish among banks or corporations, they might try to reclaim all their assets. But, if at least some well-informed investors can distinguish sound from unsound operations, a panic may be just what is needed to separate the wheat from the chaff, as it tends to drive out poorly managed enterprises. According to several scholars, this model better captures the workings of the U.S. economy in the national-banking period (1863-1913).[64]

I suggest that the asymmetric-information model also applies to the panic of 1857. What existed in mid-1857 was a web of relationships among banks, securities markets, railroads, federal and state government, and investors large and small, domestic and foreign. Exuberant expectations that land and railroad investments would continue generating breakneck price increases, coupled with spotty information about the valuation of assets and little oversight, meant large holes in the web that made it particularly vulnerable to tearing.

Then something happened that quickly sobered up investors and creditors: the decision in *Dred Scott* to open Western territories to slavery. This piece of new information was enough to unleash financial panic.[65]

2. A Model of Antebellum Westward Migration, Land Values, and Territorial Status

To see why *Dred Scott* precipitated a panic, consider the most salient fact known to Northerners at the time of the case: land values in the South were lower and increased less rapidly than in the North.[66] As the following paragraphs show, the nature of regional production helps explain this pattern. One consequence of a shift in territorial status from free to slave was a freeze in westward migration by Northerners, which in turn chilled asset markets.

Jeffersonian yeoman farmers epitomized the North: immobile land was their primary owned asset, and they demonstrated a preference for proprietorship – even of a small holding – over hiring themselves out.[67] Labor was thus the scarce factor in agricultural production. Once settled, free-soil farmers put their money into land

clearing, schools, towns, transportation, and other forms of local development.[68] This investment in turn affected the value of the surrounding area.[69]

The South, in contrast, held much of its wealth in mobile assets – that is, slaves.[70] Although land was also an important part of the Southerner's portfolio, the very fact that property could be held in a form not affected by local development meant Southerners had a different outlook on internal improvements as well as a production process that emphasized relatively abundant labor inputs. That Cyrus McCormick, with his labor-saving reaper, changed the locus of his operations from Virginia to Illinois in the mid-1840s is not surprising.[71]

Production processes were another difference between the two regions. Southerners practiced "shifting cultivation" and thus held large tracts of unimproved land, whereas Northerners kept a high proportion of land in constant use. In 1860, Southerners cultivated only one of every three owned acres, while Northerners improved more than half their acreage.[72]

Did permitting slaves into a territory necessarily mean they would come? Stephen Douglas thought that the Kansas-Nebraska Act was all symbol and no substance: in his view, slavery itself would not be viable in the eponymous territory.[73] Yet the evidence overwhelmingly shows that slavery could thrive in the territories.[74] Abraham Lincoln himself displayed a map showing the climactic and soil similarities between the Kansas-Nebraska territory and various Southern regions.[75] Free-soilers therefore could reasonably believe that allowing slavery into a territory might bring slaves in, whether they arrived with their masters or were sold to new ones.[76]

Converting a territory from free-soil to slave would thus reduce the probability of migration westward for Northerners due to the anticipated effect on land values. Because private and public investments would be divided among multiple assets under a slave regime rather than devoted primarily to immobile property, expected benefits for small, non-slaveholding enterprises would be less than in a free-soil environment. Add to this a large dose of racism and a panic about slave insurrections that grew palpable in the months just before *Dred Scott* was decided.[77] Even if many of the fears of freeholders were not borne out – virtually no slaves ever made it to Nevada, New Mexico, or Utah, despite the legality of slavery there[78] – expectations were what mattered.[79]

Could Southerners simply replace Northerners? Certainly, Southerners bought land in the territories and western states.[80] Yet the sheer number of potential migrants was much smaller in the South.[81] Not only that, if Southern patterns of land value and growth were transplanted west, even a full replacement of population would not have yielded the same effect on land values as migration by Northerners.

B. A Thumbnail Sketch of Short-Run Events

Determining the status of slavery in the West occupied Americans throughout the 1850s. The Compromise of 1850 admitted California as a free state but placed no restrictions on slavery in New Mexico and Utah. The Kansas-Nebraska Act of 30 May 1854 left the matter in that territory to popular sovereignty. The ambiguity of this legislation led to bitter conflict both in the nation's capital and on its frontier. The Democrats lost control of the House of Representatives in the 1854–55 elections.[82] May 1856 brought the sack of Lawrence, Kansas; John Brown's murders along the Pottawatomie; and Charles Sumner's caning by Preston Brooks in the Senate chamber.[83]

In February 1857, proslavery territorial legislators added to the tension by initiating a Kansas statehood movement.[84]

The crowning blow to free-soilers was the decision in *Dred Scott*. Until Abraham Lincoln resided in the White House, nothing prevented slavery from legally entering any U.S. territory after 6 March 1857.[85] The outcome was a stall in westward migration, a drop in the price of Western land, and faltering values of Western railroad securities.

The shock to Western land markets and railroads intensified when the New York newspapers revealed in August that the Michigan Southern railroad had printed several hundred thousand dollars' worth of shares to obtain a bank loan, hoping to cover them with future profits.[86] Then followed the failure on 24 August of the New York branch of the Ohio Life Insurance and Trust company, which had invested over half its capital in Western railroad securities and whose cashier had then embezzled a substantial portion of its assets.[87] Two days later, prominent speculative investor Jacob Little failed to meet his debts and New York banks frantically called in loans worth $4 million over the span of a single week.[88] These seem to be classic examples of Warren Buffett's "naked swimmers."[89] More chaos followed: land and railroad stock prices plunged, banks suspended specie payments and refused to roll over loans, bankruptcies proliferated, and unemployed New Yorkers protested violently.[90]

In short, something concrete – the *Dred Scott* decision – occurred, which caused investors to update their evaluation of the riskiness of assets. Because markets intertwined so closely, this shock had long-reaching effects, with the brunt of the downturn borne by the North.

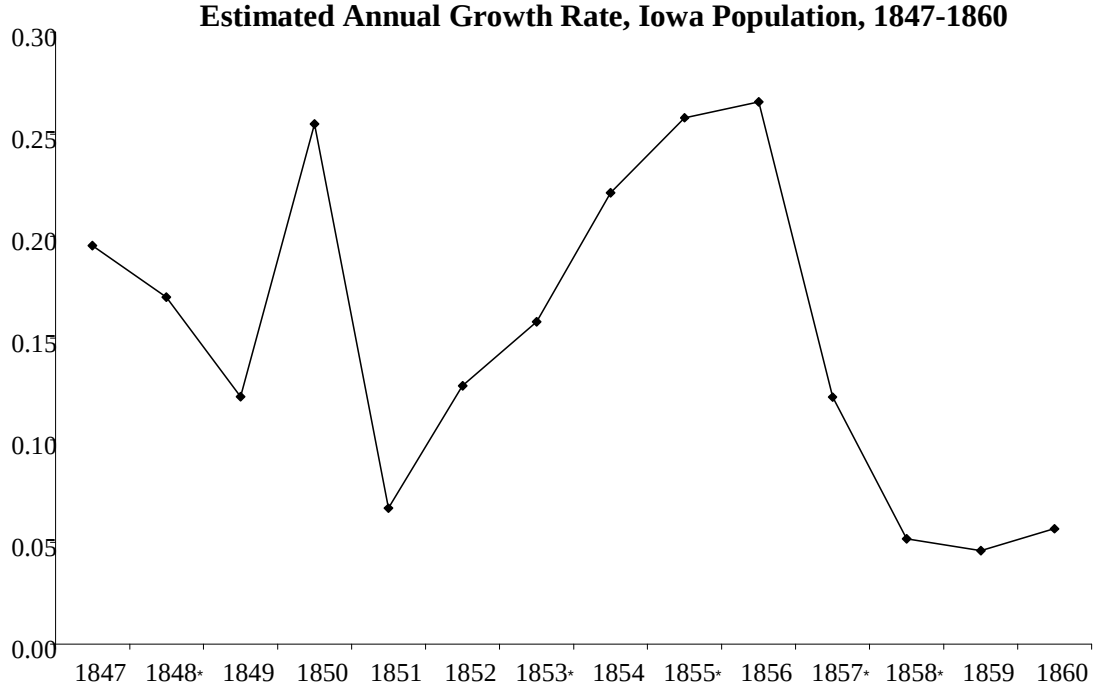
C. Supporting Data

Empirical evidence from myriad sources helps us see how various markets responded to the events of 1857. Let's take a look, both at the short-term and longer-term reactions.

1. Population

Although the federal census offers only decennial reports, some states did more frequent population counts in antebellum years. The most complete data are from Iowa; Figure 11 tracks the enormous decline in the annual population growth rate in 1857.

Figure 11
Estimated Annual Growth Rate, Iowa Population, 1847-1860



Source: Underlying population figures appear at http://iagenweb.org/census/1869-totals.htm.

Similarities appear elsewhere. From 1850 to 1857, the average annual growth rate of population in Wisconsin was 13.3 percent; this dropped to only 2 percent during the

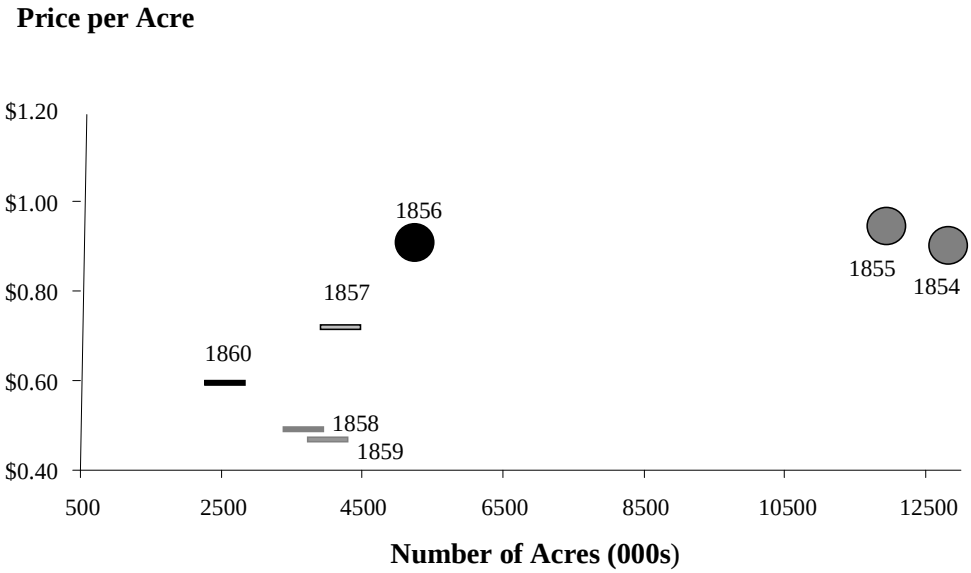
period 1857-60.[91] The Illinois population growth rate for the first half of the decade was 8.9 percent annually, falling to 5.7 percent in the second half.[92] After 1856, Northerners had cold feet when it came to moving farther West. We might attribute part of the decline in the growth to the fact that the land was becoming "settled up." Nevertheless, the sudden drop just after mid-decade is noteworthy.

Although data for the Southern states are sketchy, the Texas almanac of 1857 suggests a 13 percent annual growth rate from 1850 to 1857, followed by rate half that size during the last three years of the decade.[93] These figures imply that westward movement tailed off in the South as well, although perhaps less abruptly than in the North.[94]

2. Land prices

Recall that public-land per-acre sale prices hovered in the 90-cent range in the 1854-56 period and Western land sold in the secondary market at a feverish pace just before the crisis. The slowdown in migration coincided with fewer acres purchased and – more importantly -- much lower prices, as Figure 12 shows.

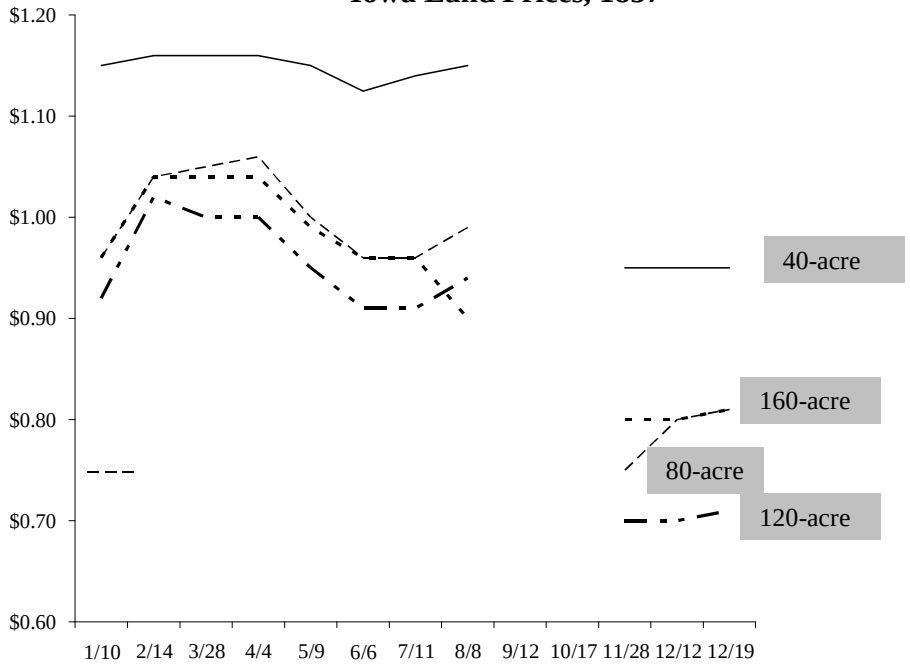
Figure 12
Number and Price of Cash Acres Entered at Public Land Offices, 1854–1860



Source: Smith and Cole (1935), p. 185.

Finer data, quoted in bi-weekly editions of *Thompson's Bank Note and Commercial Reporters* and graphed in Figure 13, reveal the drop in Iowa land prices shortly after the *Dred Scott* decision in March 1857. Figure 13 also shows that, at the peak of the crisis, land markets closed down completely.

Figure 13
Iowa Land Prices, 1857



*Source: Thompson's Bank Note and Commercial Reporters (*various dates).

Contemporaneous newspapers noted what had transpired. An editorial in *The Independent* stated, for instance,

> [A] favorite mode of investment has been in real estate, either by mortgage or purchase of houses and lands. How many of our people last summer counted up their gains from the purchases of Western lands, which had increased in value on the rise of real estate in cities, at tens and hundreds of thousands of dollars. But those lands so highly valued then are now unsaleable or of doubtful title; that city property has depreciated, and would not bring the price originally paid for it . . .[95]

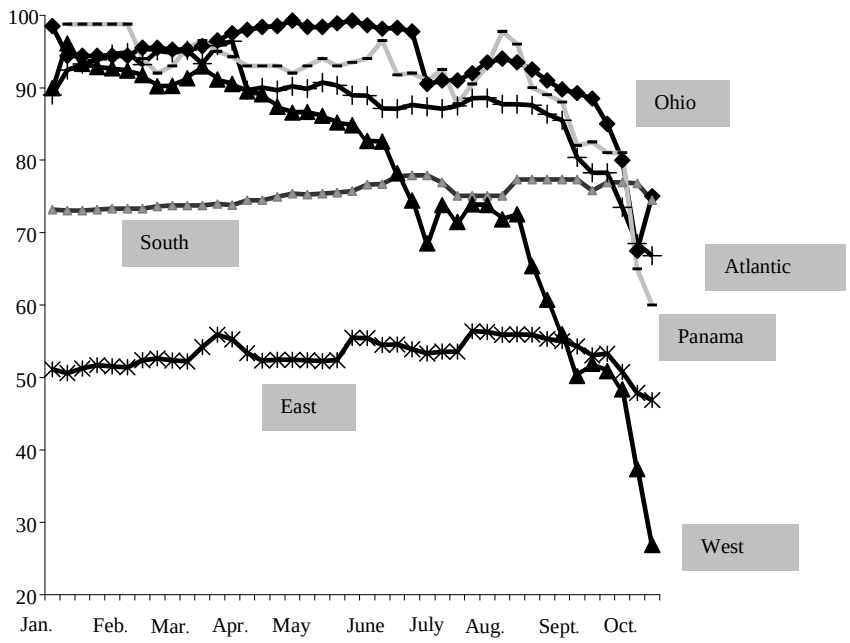
Land prices did stabilize, albeit at a considerably lower level. By 1860-61, Western land routinely sold at public land offices at a rate of about 60 cents per acre.[96]

3. Railroad securities

Railroad securities reflected the turmoil in land markets in 1857; at the same time, Western passenger traffic all but ceased.[97] Scandals took their toll on individual stock and bond values as well.

Figure 14 offers bi-weekly data on stock prices for the first ten months of 1857. Note particularly the drop in prices for Western (including internal Ohio) railroad stock just after the *Dred Scott* decision came out, then the additional fall in late summer. Stock prices for the first transcontinental line – the Panama railroad[98] – also fell sharply through August and September; Atlantic stock declined somewhat as well. Contrast these patterns with those for Eastern and Southern lines, where stock prices remained fairly steady throughout the period.[99]

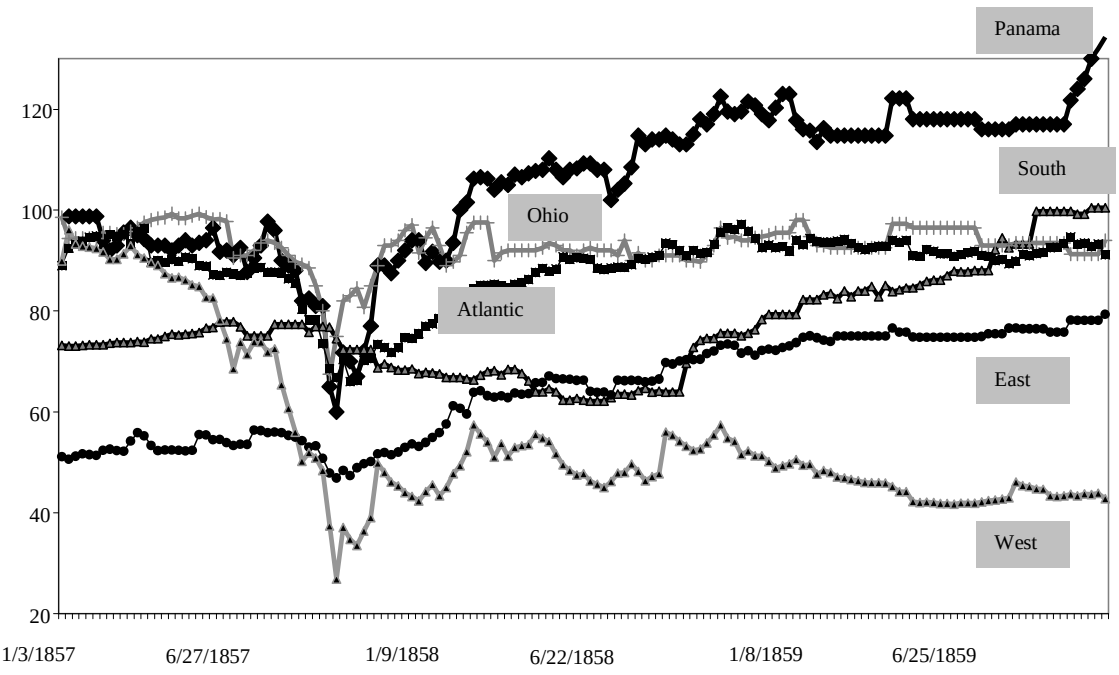
Figure 14
Railroad Stock Indices, 1/3/57-10/10/57



Source: Sylla et al. (2002).

If we take a longer view, however, we see that the panic had lasting effects some places but not others. In particular, the stock prices for Western lines remained depressed through the end of 1859, as Figure 15 shows. Eastern, Atlantic, and internal Ohio railroads recovered completely and, in some cases, enjoyed modest gains in stock prices over their early-1857 levels. Notably, stock prices of Southern railroads never fell by much during 1857 and then climbed quite a bit through the end of 1859. Panama railroad stock also did well, perhaps because the Mountain Meadows massacre in September 1857 made the Panama route far more attractive to California migrants than the railroad-stagecoach overland journey.[100]

Figure 15
Railroad Stock Indices, 1857-59



Source: Sylla et al. (2002).

Regression results reinforce these findings.[101] Table 2 lists coefficients from an ordinary-least-squares regression that casts a regional stock price index as a function of

its own lagged value and a series of dummy variables for various time periods.[102] Not surprisingly, the coefficient on the lagged index value is significant for all regions: we would expect the value of stock in a given period to have a close relationship to its value in the period before. What is most striking, however, is the large, negative, and statistically significant coefficient on the dummy variable pertaining to the time period after *Dred Scott* but before the failure of Ohio Life for the western regression. This provides further confirmation that *Dred Scott* caused distress for western railroads before the full-blown general financial panic began. The only other statistically significant coefficients corroborate earlier findings that the 1854 panic was mostly confined to the east (particularly the Atlantic rather than the New England region), that the Panama road appeared especially attractive at its inception and after the 1857 panic, and that the western roads continued to suffer after *Dred Scott.*

Table 2
Stock Index Regression, by Region

dependent variable = price index

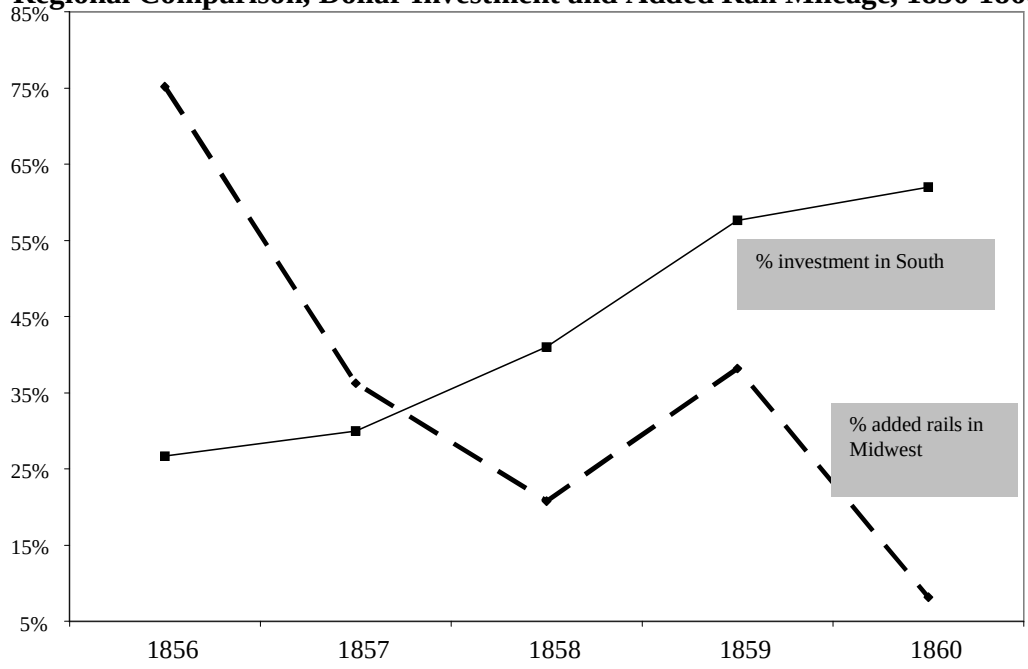
Variable	βatlantic	βeast	βsouth	βpanama	βwest
constant	2.215*	0.933	0.446	2.365	2.244*
D (1854 panic)	-1.934*	0.208	-0.017	3.560*	0.920
D (post 54-*dred*)	-0.306	-0.349	0.035	0.560	0.123
D (*dred*)	-0.587	-0.210	0.144	0.086	-1.620*
D (1857 panic)	-1.193	-0.413	-0.541	0.295	-2.104*
D (post 1857)	-0.111	0.202	0.327	1.414*	-1.039*
lag price index	0.978*	0.988*	0.994*	0.970*	0.975*
N	513	513	491	307	513
adj. R-squared	0.98	0.994	0.98	0.953	0.99

*Significant at the 5 percent level, 2-tailed test

Figure 16 highlights other regional differences. The percentage of railroad investment going to the South climbed from just over 25 percent in 1856 to nearly 65

percent in 1860. The percent of additional rails in the nation ending up in the Midwest plummeted from 75 percent in 1856 to below 25 percent in 1858, with a brief recovery in 1859 and another large fall in 1860. Certainly part of this reflects the greater buildup in the Midwest in earlier years, but the stock price data suggest that railroad investment in the Midwest generally became less attractive than in the South in the three years before the Civil War began.

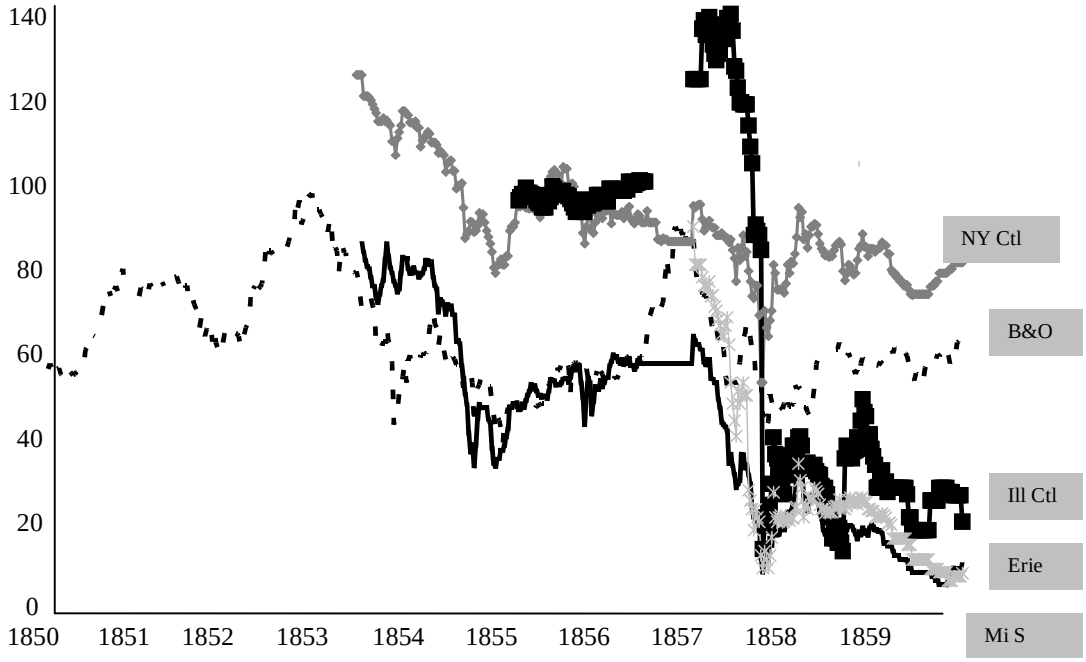
Figure 16
Regional Comparison, Dollar Investment and Added Rail Mileage, 1856-1860



Sources: Wilson and Spencer (1950), p. 339, Stover (1987), p. 317, Fishlow (1965), Tab. 16, *Historical Statistics of the United States.*

The indices mask some important differences across railroad companies. What Figure 17 shows is that speculation in Illinois Central stock ran rampant in early 1857.

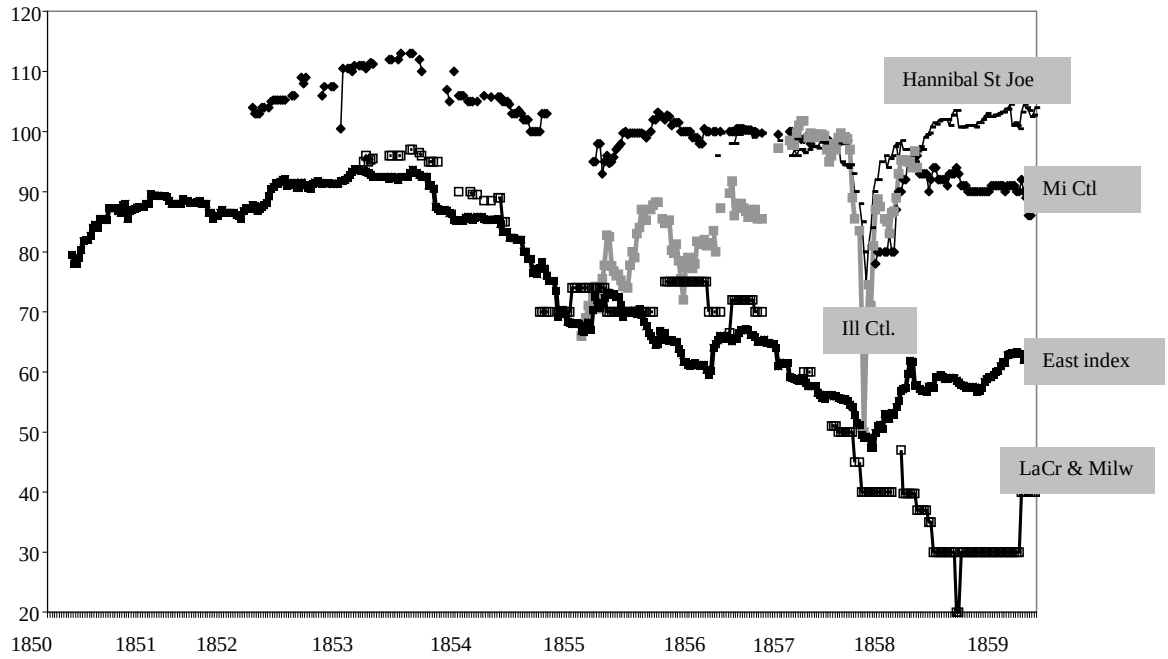
Figure 17
Stock Price Indices, Major Lines, 1850-59



Source: Sylla et al. (2002).

After the initial shock of the crisis, relatively well-run companies with trunk lines running west -- like the B&O (the southernmost cross-country line) and the New York Central -- saw recovery in their security prices. So did the Michigan Central and the recently constructed internal-Missouri-based Hannibal & St. Joseph, as Figure 18 shows. But security prices stayed down for companies revealed to have shady or incompetent management.[103] These included the infamous Michigan Southern, the Erie, and the LaCrosse & Milwaukee.[104] Illinois Central stock and bond prices both took a steep dive; although bond prices recovered (in part because they reached maturity dates), stock prices remained depressed.

Figure 18
Railroad Bond Prices, 1850-59

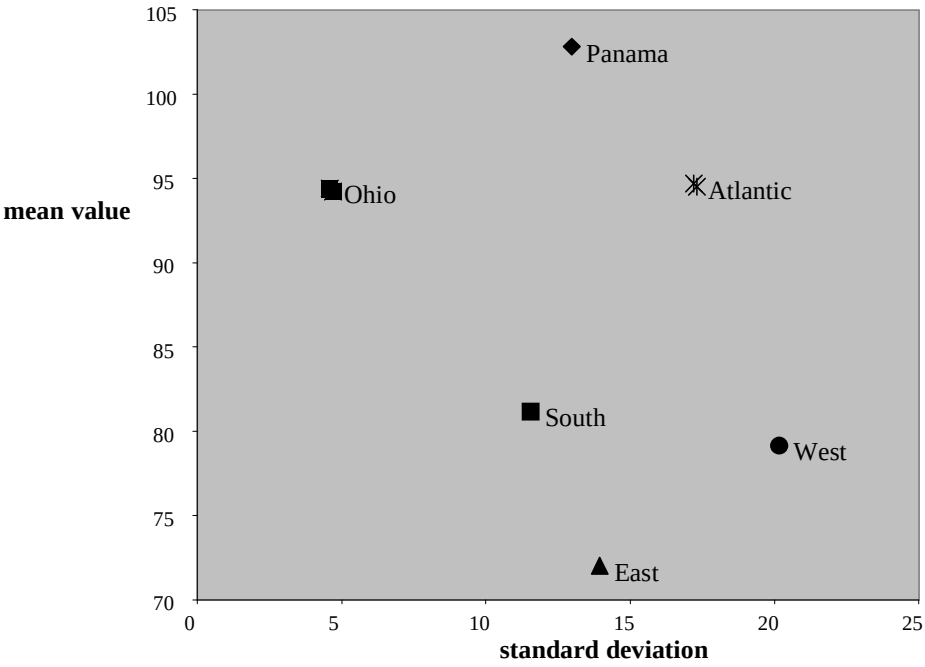


Source: Sylla et al. (2002).

Another way of looking at stock prices is to analyze their expected returns, corrected for risk. I do not have enough information to perform a rigorous analysis. But the graphs below offer some suggestive comparisons. Figure 19 maps the average stock price against its standard deviation for railroads in various regions. The standard deviation is a measure of the volatility of the stock. Roughly speaking, risk-averse investors would be happier at a given standard deviation (a given volatility) if they received a higher average price. By the same token, given a higher average price, they would like a lower standard deviation (lower volatility). Over the entire 1850-59 period, people holding a portfolio of Southern railroad stock enjoyed a higher average stock price

and lower volatility than those owning Western railroad stocks.

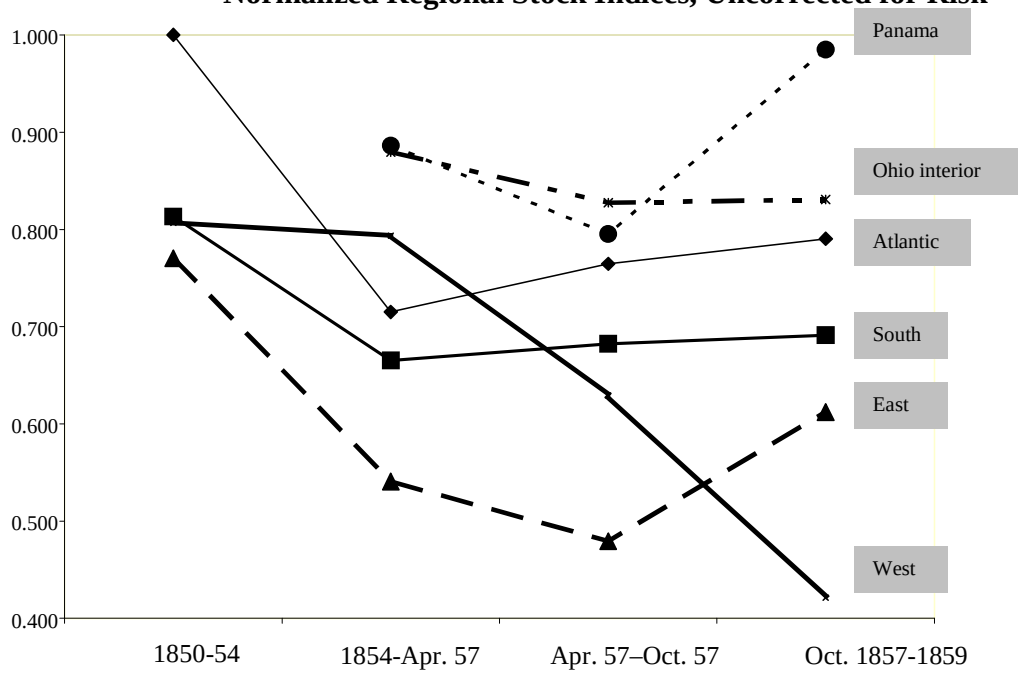
Figure 19
Mean Value and Risk, Regional Stock Indices, 1850-1859



Source: Sylla et al. (2002).

Figures 20 and 21 tackle the information in a different way. In the first, I measure average stock prices within a given time period by region, normalized by the largest possible average (which occurred for Atlantic lines in the period 1850 to 1854). The most prominent features of Figure 20 are the fall for Western lines (excluding Ohio interior lines) from April 1857 through 1859, the earlier decline (in the 1854 to April 1857 period) for Atlantic, Eastern, and Southern lines, the recovery in Atlantic, Eastern, and Panama stock prices after the 1857 panic, and the steadiness in the Southern index after 1854.

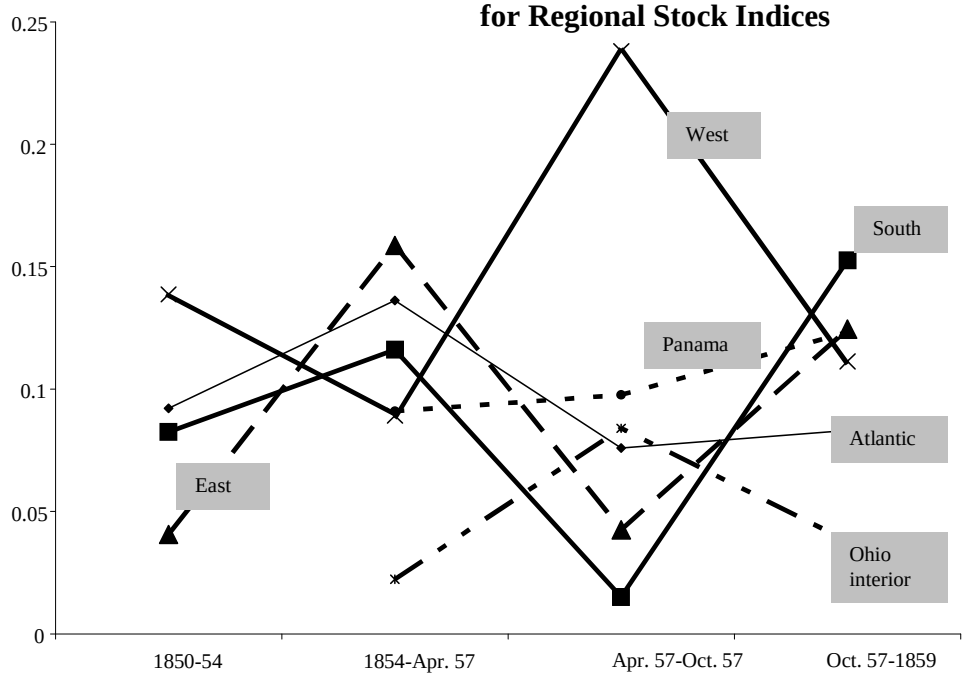
Figure 20
Normalized Regional Stock Indices, Uncorrected for Risk



Source: Sylla et al. (2002).

Figure 21 depicts the standard deviation as a percentage of the mean value for the stock index in question. This is an admittedly crude measure of volatility, in part because the lengths of the periods vary, but it at least offers an indication of how much stock prices in a given region move around during a particular period relative to prices in other regions. Note the relatively high volatility in the Eastern and Atlantic indices in the three years before the panic, followed by the extremely high volatility in the Western index during the panic itself, especially by comparison to the Southern index. This latter instability is particularly notable as it pertains to only a seven-month period.

Figure 21
Standard Deviation as a Percentage of Mean Value for Regional Stock Indices



Source: Sylla et al. (2002).

4. Banks

The close connections among land markets, securities markets, and banks -- particularly via call loans -- meant that many Northern banks were in trouble as soon as the other markets began to founder. The New York clearing house and the Suffolk Bank in New England did little to stop the hemorrhaging of funds; the poorly managed Bank of Pennsylvania closed on 25 September, 62 of the 63 New York banks suspended payments by 12 October, and New England and London banks soon followed.[105] The sinking of the *S.S. Central America* in mid-September, with its cargo of 30,000 pounds of gold from the San Francisco mint, didn't help matters. A total of 1,415 U.S. banks failed in the month of October alone.[106] Because banks refused to roll over loans to securities brokers,

several brokers went bankrupt.[107] Although New York banks began to redeem in specie by December 12, this was too late for some people.[108]

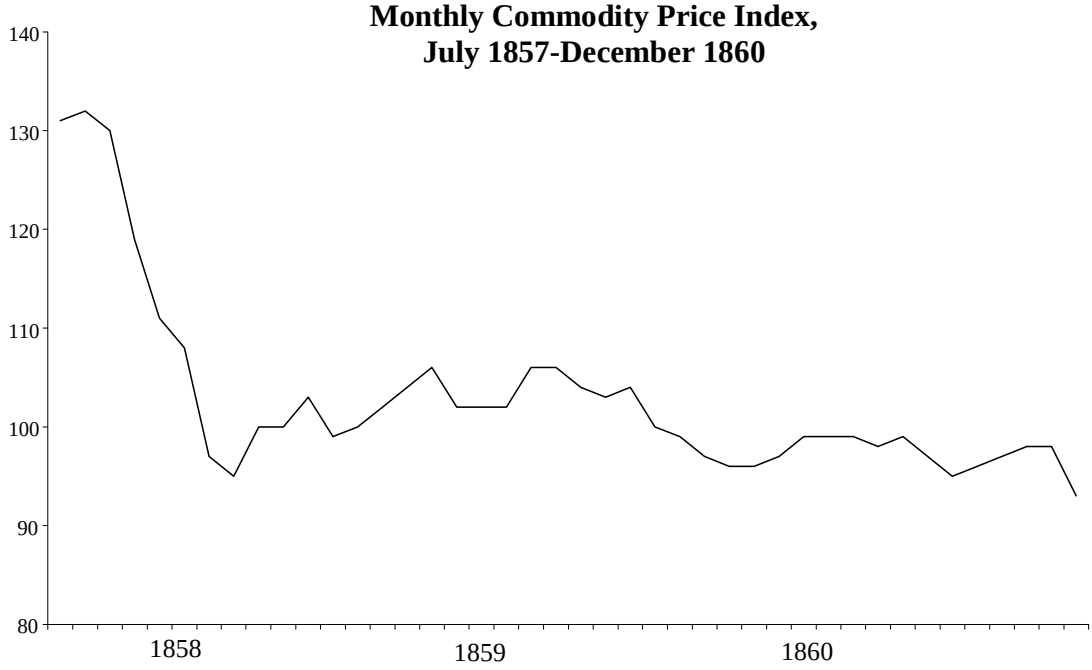
Banks were not acting unilaterally, however. Customer behavior and legal constraints mattered as well. Some commentators think that concerted effort by a few large New York banks could have stemmed the panic.[109] But banks pointed out that usury laws constrained them from raising interest rates for riskier borrowers.[110] Not only that, depositors pulled money out even faster than banks called in loans. Smith and Cole (1935) show that the ratio of loans to net deposits fell from a level of 160 in November 1854 to as low as 133, but the ratio actually climbed to 163 in August 1857 and 176 in October 1857.[111]

In contrast to banks in the Northeast, Southern banks remained solvent and stable. All New Orleans banks save one continued to redeem in specie, as did most Kentucky banks and more than half of South Carolina banks. So did the Bank of Indiana – not a Southern bank, but not part of the Eastern network either.[112]

5. Commodities and Slaves

Like the prices of railroad securities and land, the prices of commodities plummeted in the latter half of 1857.[113] The *New England Farmer* reported that cattle priced at more than $30 in late fall 1857 went for only $18 in January 1858, for instance.[114] Figure 22 shows the steep fall in the monthly commodity price index.

Figure 22
Monthly Commodity Price Index,
July 1857-December 1860



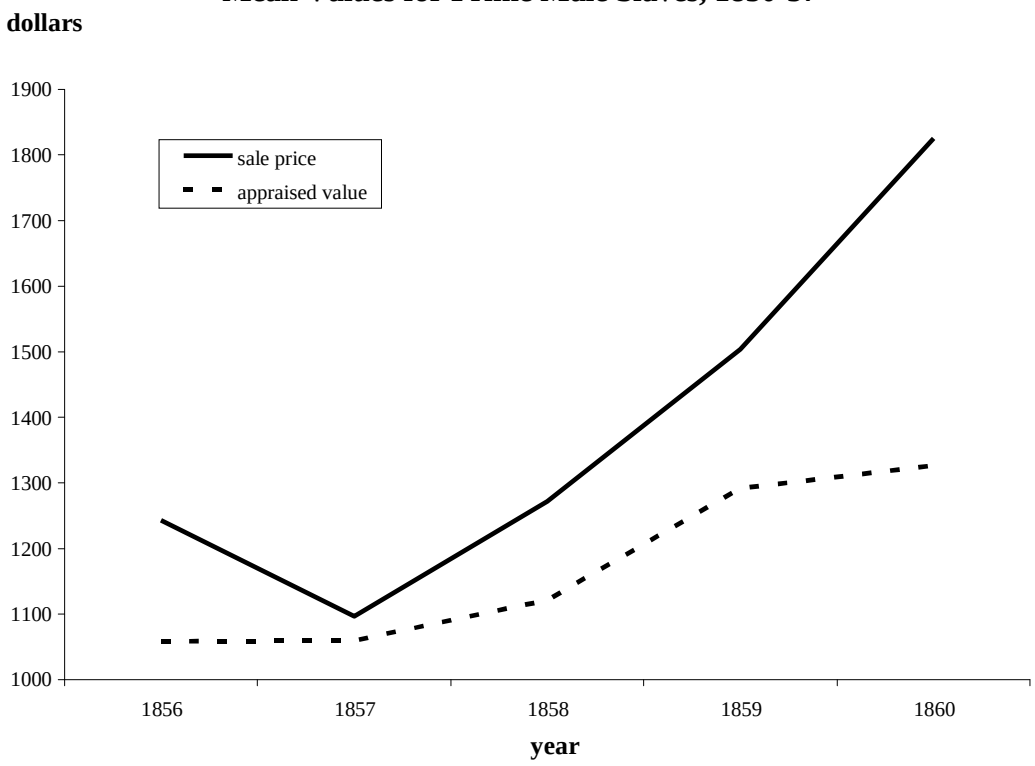
Source: Smith and Cole (1935), Tab. 52, p. 167.

What happened in commodity markets was complicated by the reduction in tariffs during the last month of the Pierce administration. Northern ironmasters and textile manufacturers complained bitterly about the loss of protection and steep falls in the prices of their products, whereas Southern cotton growers suffered relatively less from price declines.[115]

Tellingly, business failures over the life of the panic accounted for 3.24 percent of all establishments in the North but only 1.21 percent in the South. Estimated losses from the panic to the commercial community in the free states were $142 million but only about one-tenth that much in the slave states.[116]

Just as significantly, slave sales prices took only a small dip in 1857, then climbed rapidly thereafter, as Figure 23 shows. Appraisal values remained steady or rose, even during the panic.

Figure 23
Mean Values for Prime Male Slaves, 1850-57



Source: Fogel and Engerman (1976).

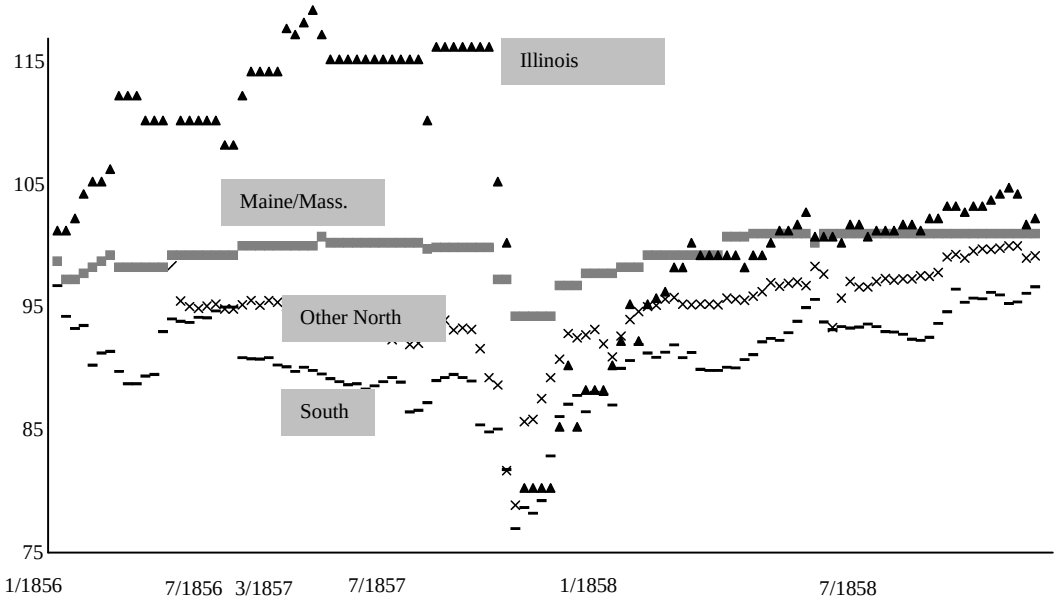
6. Governmental and international reverberations

Although banks had no recourse to a central bank in 1857, the country did boast an independent Treasury that had some of the same powers.[117] When the panic began, Treasury Secretary Howell Cobb took mild action, buying up private securities as well as trying to finance a growing federal deficit.[118] Some commentators think Cobb came to the rescue too early, then abandoned the nation to its fate.[119] Cobb was aware of criticism

at the time, for he peevishly stated that, “There are many people who seem to think it is the duty of the government to provide relief in all cases of trouble and distress.”[120]

Some state governments felt the effects of the panic, in part because of their close ties to railroads. As Figure 24 shows, the value of Illinois state bonds dropped sharply in late autumn. In contrast, other state bonds – particularly in Maine and Massachusetts -- held their value fairly well even at the height of the crisis. What the patterns suggest is that the impact on municipal bond prices generally was short-lived in virtually all states except Illinois. What is more, state bond prices converged at the beginning of 1859 in nearly the same way as they had at the beginning of 1856: the most notable feature of Figure 24 is not the decline in prices in the fall of 1857 but rather the huge run-up in Illinois bond values during the preceding year. Just as in land, financial, and commodity markets, the anomaly is the speculative bubble beforehand rather than its bursting afterward.

Figure 24
Grouped-State Bond Values, 1856-1859



Source: Sylla et al. (2002).

The panic spread across national borders as well, in part because of interlocking financial and securities markets.[121] British, Scottish, and French banks and individual holders of U.S. railroad stocks suffered large losses. In Europe, the panic culminated in December in Hamburg, Germany, when the Austrian Central Bank intervened with a loan of 10 million florins to prop up the staggering financial market.[122]

III. AFTERMATH: *DRED* AND PANIC EMBOLDEN THE SOUTH

Two features of the Panic of 1857 are worth noting: it didn't last long in and of itself, but its uneven regional impact had long-lasting effects. The decision in *Dred Scott* helped set off the panic which, though brief, was felt particularly in the North. Northern institutions stumbled whereas Southern ones remained stable, due partly to differences in railroad financing, state involvement in transportation endeavors, banking practices, portfolio holdings, and product mix. Southerners thus felt more confident that they could

succeed on their own. This is not a new thought: among others, Allen Nevins, Kenneth Stampp, and James Huston suggest a connection between the antebellum panic and secession.[123] What is new here is the abundant empirical evidence to support this contention.

Observers of today's financial crisis might be surprised at the short duration of the antebellum upheaval. Despite – or perhaps because of -- the absence of strong, active public institutions, people were not helpless: private coordination among Southern banks and actions of Northern clearinghouses helped resolve the antebellum crisis.[124] Moreover, sound companies generally remained in business, whereas poorly run enterprises went bust, or at least experienced large devaluations in stock prices. Commodity prices stabilized at lower levels fairly quickly. Financial markets calmed down before Christmas and land markets soon followed.[125] Perhaps most important for future events, however, Southern assets – both financial and real – experienced far smaller price shocks during the panic and exhibited more robust growth after it than Northern assets.

So the panic cleaned house – but divided it as well. Southerners blamed the North for the crisis and for the temporary hit to their pocketbooks. Jefferson Davis blustered that the North's extravagance and speculation in railroad stocks and Western land had caused the nation's problems, for example.[126] Yet Davis also noted that the South suffered less and recovered more quickly from the crisis: he reassured an audience in Jackson, Mississippi, that "[Southern] prosperity was not at the mercy of such a commercial crisis . . . Our great staple was our safety."[127]

Other prominent Southerners went farther, extolling the stability of the South and disparaging the volatility of the North. Alabama Congressman Jabez Curry observed that Northern workers "suffering from the terrible pecuniary crisis" had taken to the streets and "with hungry mouths" had cried out "Bread or Blood!" Southern slaves, in contrast, were hardly "aware of any financial pressure, because labor and capital are there harmonized, and there is no conflict between them."[128] In his famous "King Cotton" speech, South Carolina Senator James Hammond viewed the South as the nation's savior after the panic and offered a barely veiled threat:

> When the abuse of credit had destroyed credit and annihilated confidence; when thousands of the strongest commercial houses in the world were coming down, and hundreds of millions of dollars of supposed property evaporating in thin air; . . . what brought you up? Fortunately for you it was the commencement of the cotton season, and we have poured in upon you one million six hundred thousand bales of cotton just at the crisis to save you from destruction. That cotton, but for the bursting of your speculative bubbles in the North, which produced the whole of this convulsion, would have brought us $100,000,000. We have sold it for $65,000,000 and saved you. Thirty-five million dollars we, the slaveholders of the South, have put into the charity box for your magnificent financiers, your "cotton lords," your "merchant princes." . . . The South have sustained you in great measure. You are our factors. You fetch and carry for us. . . . Suppose we were to discharge you; suppose we were to take our business out of your hands; -- we should consign you to anarchy and poverty.[129]

De Bow's Review expressed the views of many in the South, stating that Dixie's wealth was permanent and real whereas the North's was fictitious.[130]

The decision in *Dred Scott* brought matters to a head in countless ways. But the new empirical evidence presented here strongly supports its role in triggering the subsequent financial upheaval. And, by convincing Southerners of the strengths of their

institutions and the weaknesses of Northern ones, the panic of 1857 helped give rise to the standoff at Fort Sumter.

SOURCES

Adler, Jeffrey. *Yankee Merchants and the Making of the Urban West: The Rise and Fall of Antebellum St. Louis*. Cambridge: Cambridge University Press, 1991.

Atack, Jeremy, Bateman, Fred, and Thomas Weiss. "Risk, the Rate of Return, and the Pattern of Investment in Nineteenth Century American Manufacturing." *Southern Economic Journal*, vol. 49, no. 1 (July 1982), pp. 150-63.

Atack, Jeremy and Peter Passell. *A New Economic View of American History*, 2d. ed. New York: Norton, 1994.

Bagley, Will. *Brigham Young and the Massacre at Mountain Meadows.* Norman, OK: University of Oklahoma Press, 2002.

Baskin, Jonathan. "The Development of Corporate Financial markets in Britain and the United States, 1600-1914: Overcoming Asymmetric Information." *Business History Review*, vol. 62, no. 2 (Summer 1988), pp. 199-327.

Berwanger, Eugene. *The Frontier Against Slavery: Western Anti-Negro Prejudice and the Slavery Extension Controversy*. Champaign: University of Illinois Press, 1967.

Bodenhorn, Howard. "Capital Mobility and Financial Integration in Antebellum America." *Journal of Economic History*, vol. 52, no. 3 (Spring 1992), pp. 585-610.

_____. "Short-Term Loans and Long-Term Relationships: Relationship Lending in Early America." *Journal of Money, Credit, and Banking*, vol. 35, no. 4 (Aug. 2003), pp. 485-505.

Calomiris, Charles, and Charles Kahn. "The Efficiency of Self-Regulated Payments Systems: Learning from the Suffolk System." *Journal of Money, Credit and Banking*, vol. 28, no. 4, part 2 (Nov. 1996), pp. 766-797.

Calomiris, Charles, and Gary Gorton. "The Origins of Banking Panics: Models, Fact, and Bank Regulation." In Glenn Hubbard, ed., *Financial Markets and Financial Crises*. Chicago: University of Chicago Press, 1991, pp. 107-73.

Calomiris, Charles, and Schweikart, Larry. "The Panic of 1857: Origins, Transmission, and Containment." *Journal of Economic History*, vol. 51, no. 4 (Dec. 1991), pp. 807-34.

Canova, Fabio. "Were Financial Crises Predictable?" *Journal of Money, Credit, and Banking*. vol. 26, no. 1 (Feb. 1994), pp. 102-24.

Chandler, Alfred. "Patterns of American Railroad Finance, 1830-1850." *Business History Review*, vol. 28, no. 3 (Sept. 1954), pp. 248-263.

Cleveland, Frederick, and Fred Powell. *Railroad Finance.* New York: D. Appleton, 1912.

Cootner, Paul. "The Role of the Railroads in United States Economic Growth." *The Journal of Economic History*, vol. 23, no. 4 (Dec. 1963), pp. 477-521.

Cotterill, R.S. "Southern Railroads, 1850-60." *Mississippi Valley Historical Review*, vol. 10, no. 4 (Mar. 1924), pp. 396-405.

Dew, Charles. "Black Ironworkers and the Slave Insurrection Panic of 1856." Journal of Southern History, vol. 41, no. 3 (1975), pp. 321-38.
Dewing, Arthur. "The Theory of Railroad Reorganization." *American Economic Review*, vol. 8, no. 4 (Dec. 1918), pp. 774-95.
Diamond, Douglas, and Philip Dybvig. "Bank Runs, Deposit Insurance, and Liquidity." *Journal of Political Economy*, vol. 91, no. 3 (June 1983), pp. 401-19.
Donald, David. *Charles Sumner and the Coming of the Civil War*. New York: Knopf, 1960.
Donald, W.J. "Land Grants for Internal Improvements in the United States." *Journal of Political Economy*, vol. 19, no. 5 (May 1911), pp. 404-410.
Dwight, Edmund. "The Financial Revulsion and the New York Banking System." *Hunt's Merchant Magazine*, vol. 38 (Feb. 1858), p. 159.
Economopoulos, Andrew. "Illinois Free Banking Experience." *Journal of Money, Credit, and Banking*, vol. 20, no. 2 (May 1988), pp. 249-64.
Egnal, Marc. "Rethinking the Secession of the Lower South." *Civil War History*, vol. 50, no. 3 (Sept. 2004), pp. 261-90/
Evans, David. *The History of the Commercial Crisis, 1857-1858, and the Stock Exchange Panic of 1859*. London: Newton Abbot, 1859.
Fehrenbacher, Don. *The Dred Scott Case: Its Significance in American Law and Politics*. New York: Oxford University Press, 1978.
Fishlow, Albert. *American Railroads and the Transformation of the Ante-bellum Economy*. Cambridge, MA: Harvard University Press, 1965.
_____. "Internal Transportation." In *American Economic Growth: An Economist's History of the United States* (Lance Davis et al., eds.). New York: Harper & Row, 1972.
Fogel, Robert. *Railroads and American Economic Growth: Essays in Econometric History*. Baltimore: Johns Hopkins Press, 1964.
_____. *Without Consent or Contract: The Rise and Fall of American Slavery*. New York: Norton, 1989.
_____ and Stanley Engerman. *Slave Sales and Appraisals, 1775-1865* [Computer file]. ICPSR07421-v3. Rochester, NY: University of Rochester [producer], 1976. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [producer and distributor], 2006-10-11. doi:10.3886/ICPSR07421.
Garvy, George. "Rivals and Interlopers in the History of the New York Security Market." *Journal of Political Economy*, vol. 52, no. 2 (June 1944), pp. 128-143.
Gates, Paul. "The Promotion of Agriculture by the Illinois Central Railroad, 1855-1870." *Agricultural History*, vol. 5, no. 2 (Apr. 1931), pp. 57-76.
_____. "Southern Investments in Northern Lands Before the Civil War." *Journal of Southern History*, vol. 5, no. 2 (1939), pp. 155-85.
_____. "The Struggle for Land and the "Irrepressible Conflict." *Political Science Quarterly*, vol. 66, no. 2 (June 1951), pp. 248-271.
Gerhard, Frederick. *Illinois as it is: Its History, Geography, Statistics, Constitution, Laws*. Illinois: C. Desilver. Original from the University of Michigan. Digitized February 17, 2006. http://books.google.com/books?id=PkYV2xFpP-UC.

Goodrich, Carter, and Harvey Segal. "Baltimore's Aid to Railroads: A Study in the Municipal Planning of Internal Improvements." *Journal of Economic History*, vol. 13, no. 1 (Winter 1953), pp. 2-35.
Goodwin, Dolores Kearns. *Team of Rivals: The Political Genius of Abraham Lincoln*. New York: Simon and Schuster, 2005.
Gorton, Gary. "Clearinghouses and the Origin of Central Banking in the United States." *Journal of Economic History*, vol. 45, no. 2 (June 1985), pp. 277-83.
_____. "Banking Panics and Business Cycles." *Oxford Economic Papers*, new series, vol. 40, no. 4 (Dec. 1988), pp. 751-781.
Haines, Michael and Robert Margo. "Railroads and Local Economic Development: The United States in the 1850s." NBER Working Paper no. W12381 (July 2006).
Hammond, Bray. *Banks and Politics in America: From the Revolution to the Civil War*. Princeton, NJ: Princeton University Press, 1957.
Haney, Louis. *A Congressional History of Railways*, 2 vols. Madison: University of Wisconsin, 1908-10; reprint ed., New York: Augustus M. Kelley, 1968.
Historical Statistics of the United States, Millenial Edition, online at www.hsus.cambridge.org. S. Carter, S. Gartner, M. Haines, A. Olmstead, R. Sutch, G. Wright, eds. Cambridge: Cambridge University Press, 2006.
Hughes, J. R. T. "The Commercial Crisis of 1857." *Oxford Economic Papers*, new series, vol. 8, no. 2 (Jun. 1956), pp. 194-222.
Huston, James. *The Panic of 1857 and the Coming of the Civil War*. Baton Rouge: Louisiana State University Press, 1987.
Hutchinson, William. *Cyrus Hall McCormick: Seed Time, 1809-1856*. New York: C. Appleton-Century Company, 1930.
Johannsen, Robert, ed. *The Letters of Stephen A Douglas*. Urbana: University of Illinois Press, 1961.
Kelly, Morgan, and O'Grada, Cormac. "Market Contagion: Evidence from the Panics of 1854 and 1857." *American Economic Review*, vol. 90, no. 5 (Dec. 2000), pp. 1110-24.
Keyes, Emerson. *A History of Savings Banks in the US from their inception in 1819 down to 1877*. New York: 1878 B. Rhodes, http://books.google.com/books?id=9eojzG7gFYQC
Kiewiet, D. Roderick, and Kristin Szakaty. **"**Constitutional Limitations on Borrowing: An Analysis of State Bonded Indebtedness." *Journal of Law, Economics, and Organization*, vol. 12, no. 1 (Apr. 1996), pp. 62-97.
Kindleberger, Charles. *Manias, Panics, and Crashes: A History of Financial Crises.* New York: Basic Books, 1978 (rep. 2000).
Livesay, Harold. "The Lobdell Carwheel Company: 1830-67." *Business History Review*, vol. 42, no. 2 (Summer 1968), pp. 171-94.
Majewski, John. "Who Financed the Transportation Revolution? Regional Divergence and Internal Improvements in Antebellum Pennsylvania and Virginia." *The Journal of Economic History*, vol. 56, no. 4 (Dec. 1996), pp. 763-788.
_____ and Viken Tchakerian. "The Environmental Origins of Shifting Cultivation in the Nineteenth-Century U.S. South." (Mar. 2006) Unpublished working paper available at http://www.history.ucsb.edu/faculty/majewskiItems/EO.pdf.
Markham, Jerry. *A Financial History of the U.S.* Armonk: Sharpe, 2002.

McGrane, Reginald. *Foreign Bondholders and American State Debts.* New York: Macmillan, 1935.
Miller, Harry. "Earlier Theories of Crisis and Cycles in the United States." *Quarterly Journal of Economics*, vol. 38, no. 2 (Feb. 1924), pp. 294-329.
Mitchell, David. *Ten Years Residence in the United States*. London: Smith, Elder, and Co., 1862. http://www.books.google.com.
Monroe, Haskell, and James McIntosh, eds. *The Papers of Jefferson Davis*, 10 vols. Baton Rouge: Louisiana State University Press, 1971-99.
Nevins, Allan. *Ordeal of the Union: A House Dividing 1852-1857*. New York: Scribner's, 1947.
_____. *The Emergence of Lincoln: Douglas, Buchanan, and Party Chaos 1857-1859.* New York: Scribner's, 1950.
Ng, Kenneth. "Free Banking Law and Barriers to Entry in Banking, 1838-1860." *Journal of Economic History*, vol. 48, no. 4 (Dec. 1988), pp. 877-889.
Office of the Mercantile Agency. "Business Failures in the Panic of 1857." Reprinted in *Business History Review*, vol. 37, no. 4 (Winter 1963), pp. 437-443.
Pritchett, Jonathan. "Quantitative Estimates of the United States Interregional Slave Trade, 1820-1860." *Journal of Economic History*, vol. 61 (2001), pp. 467-75.
Potter, David. *The Impending Crisis, 1848-1861*. New York: Harper & Row, 1976 (D. Fehrenbacher, ed.).
Ransom, Roger. *Conflict and Compromise: The Political Economy of Slavery, Emancipation, and the American Civil War*. New York: Cambridge University Press, 1989.
_____ and Richard Sutch. *One Kind of Freedom*. New York: Cambridge University Press, 1977.
Ratner, Sidney, Soltow, James, and Richard Sylla. *The Evolution of the American Economy*, 2d ed. New York: Macmillan, 1993.
Reed, Merl. "Government Investment and Economic Growth: Louisiana's Antebellum Railroads." *Journal of Southern History*, vol. 28, no. 2 (May 1962), pp. 183-201.
Rockoff, Hugh. "The Free Banking Era: A Reexamination." *Journal of Money, Credit, and Banking*, vol. 6, no. 2 (May 1974), pp. 141-67.
Rolnick, Arthur, and Warren Weber. "New Evidence on the Free Banking Era." *American Economic Review*, vol. 73, no. 5 (Dec. 1983), pp. 1080-91.
Schweikart, Larry. "Southern Banks and Economic Growth in the Antebellum Period: A Reassessment." *Journal of Southern History*, vol. 53, no. 1 (Feb. 1987), pp. 19-36.
Schwert, G. William. "Why Does Stock Market Volatility Change over Time?" *Journal of Finance*, vol. 44, no. 5 (Dec. 1989), pp. 1115-53.
Smith, Bruce, and Warren Weber. "Private Money Creation and the Suffolk Banking System." *Journal of Money, Credit, and Banking*, vol. 31, no. 3, part 2 (Aug. 1999), pp. 624-659
Smith, Walter, and Arthur Cole. *Fluctuations in American Business*. Cambridge, MA: Harvard University Press. 1935.
Stampp, Kenneth. *America in 1857: A Nation on the Brink*. New York: Oxford University Press, 1990.

Steckel, Richard. "The Economic Foundations of East-West Migration during the 19th Century." *Explorations in Economic History*, vol. 20 (1983), pp. 14-36.
Stevens, Edward. "Composition of Money Supply prior to Civil War." *Journal of Money, Credit, and Banking*, vol. 3, no. 1 (Feb. 1971), pp. 84-101.
Stover, John. "Southern Ambitions of the Illinois Central Railroad." *Journal of Southern History*, vol. 20, no. 4 (Nov. 1954), pp. 499-510.
_____. *American Railroads*. Chicago: University of Chicago Press, 1961.
_____. *Iron Road to the West*. New York: Columbia University Press, 1978.
_____. *History of the Baltimore and Ohio Railroad*. West Lafayette, IN: Purdue University Press, 1987.
Sylla, Richard. "Origins of the New York Stock Exchange." http://icf.som.yale.edu/pdf/hist_conference/Richard_Sylla.pdf (Draft 2003).
_____. "Integration of Trans-Atlantic Capital Markets, 1790-1845." *Review of Finance*, vol. 10, no. 4 (Dec. 2006), pp. 1-32.
_____, Legler, John, and John Wallis. "Banks and State Public Finance in the New Republic: The United States, 1790-1860." *Journal of Economic History*, vol. 47, no. 2 (June 1987), pp. 391-403.
Sylla, Richard, Wilson, Jack, and Robert Wright. *Price Quotations In Early United States Securities Markets, 1790-1860* [Computer file]. ICPSR04053-v1. New York, NY: New York University. Stern School of Business [producer], 2002. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2005-08-24.
Timberlake, Richard. "The Independent Treasury and Monetary Policy before the Civil War." *Southern Economic Journal*, vol. 27, no. 2 (Oct. 1960), pp. 92-103.
Van Vleck, George. *The Panic of 1857, An Analytical Study*. New York, Columbia University Press, 1943.
Wahl, Jenny. "Stay East, Young Man? Market Repercussions of the *Dred Scott* Decision." *Chicago-Kent Law Review* vol. 82, no. 1 (2007), pp. 361-91.
_____. "He Broke the Bank, but Did Andrew Jackson Also Father the Fed?" In *Congress and the Emergence of Sectionalism* (Paul Finkelman and Donald Kennon, eds.), Miami: Ohio University Press, 2008.
Walton, Gary and Hugh Rockoff. *History of the American Economy*, 10th ed., Mason, Ohio: Thomson South-Western, 2005.
Ward, James. "Promotional Wizardry: Rhetoric and Railroad Origins." *Journal of the Early Republic*, vol. 11, no. 1 (Spring 1971), pp. 69-88.
Weiman, David. "Peopling the Land by Lottery? The Market in Public Lands and the Regional Differentiation of Territory on the Georgia Frontier." *Journal of Economic History*, vol. 51 (1991), pp. 835-60.
Wilson, G. Lloyd, and Ellwood Spencer. "Growth of the Railroad Network in the United States." *Land Economics*, vol. 6, no. 4 (Nov 1950), pp. 337-345.
Wilson, Jack, Sylla, Richard, and Charles Jones. "Financial Market Volatility, Panics under the National Banking System before 1914, and Volatility in the Long Run, 1830-1988." In *Crises and Panics and Historical Perspective* (Eugene White, ed.). Homewood: Dow Jones/Irwin, 1990.
Wish, Harvey. "The Slave Insurrection Panic of 1856." *Journal of Southern History*, vol. 5 (1939), pp. 206-22.

Wright, Gavin. *The Political Economy of the Cotton South: Households, Markets, and Wealth in the Nineteenth Century.* New York: Norton, 1978.
_____. "Capitalism and Slavery on the Islands: A Lesson from the Mainland." *Journal of Interdisciplinary History*, vol. 17 (1987), pp. 851-70.
_____. "Slavery and American Agricultural History." *Agricultural History*, vol. 77 (2003), pp. 527-52.

ENDNOTES

[1] Vol. 9, iss. 473, p. 5, online at *ProQuest Historical Newspapers*.
[2] Attributed to Laurence J. Peter, author of *The Peter Principle*. See for example http://www.age-of-the-sage.org/history/quotations/history_4.html. Another version of this statement – which I like even better – is "History teaches us the mistakes we are going to make."
[3] 60 U.S. (19 How.) 393, 452 (1857).
[4] The authorship of the phrase has been debated for years. Most recently, Fred Shapiro makes a strong case in the *Yale Book of Quotations* for Horace Greeley as opposed to John Soule, a newspaperman from Terre Haute, Indiana. For a summary, see http://www.llrx.com/features/quotedetective.htm.
[5] The Act reduced the lot price to $1 if unsold for 10 years and to 12.5 cents if unsold for 30 years. Ratner et al., (1993), p. 139. The Act placed no limit on the number of acres any purchaser bought. Nevins (1950), p. 183.
[6] Smith and Cole (1935), p. 55.
[7] Military warrants complicated land markets in this time period. Between 1847 and 1855, Congress enacted four bounty land warrant acts granting nearly 61 million acres of unsettled public-domain lands to veterans of any war or their heirs. Atack and Passell (1994), pp. 258-9, provide a table of the significant public land laws from 1785 to 1916. A secondary market in these transferable warrants flourished: 60 percent of acres entered at the public land offices in 1857 and 1858 were warrant acres. Gates (1951), p. 254. Arbitrage would tend to equalize cash and warrant prices, however, so the cash price per acre approximates annual land prices. Wahl (2007) contains further details.
[8] Nevins (1950), p. 183; Calomiris and Schweikart (1996), p. 810.
[9] Stampp (1990), p. 218.
[10] Mitchell (1862), p. 328.
[11] Fogel (1964), pp. 82-3, provides evidence of transportation cost differentials. Scholars disagree about exactly how beneficial railroads were (see in particular Cootner 1963, Fogel 1964, and Fishlow 1965) and whether agricultural or urban land benefited more (Haines and Margo 2006).
[12] Fishlow (1965), pp. 173-6.
[13] Stover (1961), pp. 28-9, Stover (1978), Ch. 5, and *Historical Statistics of the U.S.* contain information about rail mileage.
[14] Stover (1978), p. 13, and *Historical Statistics of the U.S.*
[15] For details, see Fishlow (1965), pp. 112-114, and Stampp (1990), pp. 214-5.
[16] Atack and Passell (1994), p. 429.
[17] Stover (1961), p. 39; Stover (1978), p. 23.
[18] Stampp (1990), p. 214.
[19] Stover (1961), pp. 54-5.
[20] Nevins (1947), pp. 195, 208-14; Fishlow (1965), p. 85.
[21] Atack and Passell (1994), p. 436. Fishlow (1972), p. 506, estimates that the land subsidy was worth about $400 million, or about 5 percent of the amount invested in railroads between 1850 and 1880. Also see Haney (1968); Stover (1978), pp. 94-5.
[22] Stampp (1990), p. 218. Also see Gates (1931).
[23] Ratner et al. (1993), p. 140, displays a copy of this advertisement.

[24] Sylla and his collaborators have put together a large data set of prices of public securities that traded in nine U.S. markets and London between 1786 and 1862. They have made these data available via the Inter-University Consortium for Political and Social Research (ICPSR).

[25] The exchanges mostly carried the securities of local companies, although multiple exchanges traded securities from the larger railroads. Although I would have liked to use the New York prices as well as the Boston ones for Northern stock, the New York series ends well before the time of the panic. Bodenhorn (1992) suggests that antebellum credit markets were reasonably well-integrated, however, and certainly more integrated than postbellum markets. An inspection of commonly reported stocks from Boston and New York exchanges shows that prices were highly although not perfectly correlated across the two markets over the 1844-1853 period.

[26] Chandler (1954), pp. 261-2; Garvy (1944), p. 130.

[27] Garvy (1944), p. 130; Schwert (1989), p. 1124; and Calomiris and Schweikart (1991), p. 809. Allan Nevins offers a particularly vivid account of the eager response of brokers when railroad securities were called. Nevins (1950), pp. 180-1.

[28] Stampp (1990), p. 215; Ratner et al. (1993), p. 123.

[29] Livesay (1968), p. 18.

[30] Baskin (1988), p. 218.

[31] Stampp (1990), p. 215. Also see Ward (1991).

[32] Stover (1978), p. 218; Fishlow (1965), p. 117.

[33] Par value for stocks varied across companies and sometimes over time within a company. To construct indices, I converted each stock price to a percentage of par value. I then combined these converted values into an index for each region. Note that the indices can only track surviving companies and thus do not capture the full effect of downturns nor the exact timing of upturns. In this regard, however, they are no different from the Dow-Jones or the Wilshire index. Even among surviving companies, not all stock prices were quoted in all periods; this can create some misleading fluctuations in the indices. I tried various methods of smoothing but decided ultimately not to use any ad hoc method. Instead, I broke out separate stock values in some tables in the text to illuminate what happened with particular companies.

I classified each railroad by region after inspecting various railroad maps from the 1850s. The Atlantic index includes primarily Maryland and New Jersey lines; I included New England, New York, and most Pennsylvania lines in the Eastern index. The Western index includes both wholly Western lines (except for interior Ohio railroads) and trunk roads that led to the west. I placed two interior Ohio roads into an index separate from the other "western" lines, thinking that movement within Ohio was not truly related to westward migration. Here are the railroads included in each index: *Atlantic* – York&Cumberland (until 1854), Baltimore&Hartford (until 1851), Baltimore&Susquehanna (until 1854), North Central (1854-59), New Jersey (1856-59), Washington&Baltimore (brief existence), Camden&Amboy (1857), Northern of New Jersey (1850-59); *South* – Pontchartrain (1852-58), Opelousas (1853-58), Jackson (1853-58), Central (1850-56), Richmond& Danville (1852-59), Richmond (1850-59), Richmond&Petersburg (1850-59), Virginia Central (1855-59); *East* -- Harlem (1852-57), Hartford&New Hampshire (1850-59), Hudson River (1852-59), Boston&Lowell (1853-

59), Boston&Maine (1850-59), Boston&Providence (1850-59), Boston&Worchester (1850-59), Concord (1850-59), Concord&Montreal (1857-59), Connecticut River (1850-59), Eastern (1850-59), Fitchburg (1850-59), Long Island (1850-57), Manchester&Lawrence (1850-59), Nashua&Lowell (1850-59), Reading (1850-59), Norwich&Worchester (18550-7), Ogden (1850-57), Old Colony&Fall River (1854-59), Philadelphia (1850-57), Port Saco (1855-59), Providence&Worchester (1853-59), Western of Massachusetts (1850-59), Worchester&Nashua (1850-59), Wilmington (1852-89), Cheshire (1850-89), Rutland (1855-86), Taunton (1850-53), Sullivan (1850-57), Boston (1850-57), Eastern (1850-89), New York&New Haven (1852-57), Passaic (1857), Passumpsic (1850-57), Stonington (1852-58), Concord&Montreal (1856-58), Boston&New York (1854-58), Grand Junction (1852-57), Rutland&Burlington (1850-56), Vermont&Canada (1852-59), Vermont&Massachusetts (1850-59), Vermont Central (1850-57); *West* -- Chicago and Rock Island (1856-59), Galena&Chicago (1855-59), Illinois Central (1855-59), LaCrosse&Milwaukee (1857-58), Michigan Central (1850-59), Michigan Southern (1857-59), Milwaukee&Mississippi (1856-58), Wisconsin&Lake Shore (1856-57), Cleveland&Pittsburgh (1856-58), Cleveland&Toledo (1855-59), New York Central (1853-59), New York&Erie (1852-59), Baltimore&Ohio (1850-59); *Ohio Interior* -- Cleveland and Columbus (1856-59), Little Miami (1856-57); *Panama*.

[34] The year 1854 was a recession year, with the downturn triggered by mismanagement in the Knickerbocker Bank and a major fraud pulled off by Robert Schuyler. Schuyler was the head of the New York & New Haven Railroad; he kept three sets of books and essentially siphoned off about $2 million for his own use, then fled to Europe. Keyes (1878) and Kelly and O'Grada (2000) offer general information about the brief Panic of 1854, which was confined mostly to New York. Details about the Schuyler episode can be found in Stover (1954), p. 500; Fishlow (1965), p. 113; and Stover (1978), p. 36. Schuyler at one point was president of the Illinois Central. Although he resigned from this position in 1853, his perfidy in the East affected IC investors for a time in 1854 as well until European investors stepped in to buy IC stocks and bonds.

[35] Dewing (1918) tells of the chaotic accounting of the early railroads.

[36] Baskin (1988), p. 228.

[37] Cleveland and Powell (1912), p. 121.

[38] See Dewing (1918); Nevins (1947), p. 236; and Stover (1978), pp. 50-1, 152-3.

[39] Smith and Cole (1935), p. 113.

[40] Nevins (1950), p. 181, refers particularly to an editorial denouncing the sale of $22 million of stock in one two-week period.

[41] Majewski (1996) contains an interesting comparison of investment patterns in Albemarle County, Virginia, and Cumberland County, Pennsylvania. Stover (1978), pp. 62, 90, discusses dividends.

[42] See for instance Cotterill (1924), pp. 398 and 402-3; Nevins (1947), pp. 197-8, 202, 240; Goodrich and Segal (1953); Reed (1962), p. 183, 196-97, 199; Stover (1978), p. 217; Stover (1987), p. 324; and Baskin (1988), p. 209.

[43] See McGrane (1935); Reed (1962), p. 191; Fishlow (1965), p. 191; and Kiewiet and Szakaty (1996). The state bank of Illinois became so involved in state public improvement that it went bankrupt in 1842. Hammond (1957), p. 612.

[44] Fishlow (1965), p. 192, and Stover (1978), p. 217, offer figures on the amounts invested. Stover (1987), p. 327, reports of a restraining order obtained by private shareholders of the B&O in December 1856, who worried that the state of Maryland and city of Baltimore had too much involvement with the railroad. The New York and Philadelphia newspapers had a field day when the Camden & Amboy wanted a 20-year renewal of its charter plus expanded monopoly powers from the New Jersey legislature. Nevins (1947), p. 240. Stover (1978), p. 153, states that Wisconsin state officials granted land to the LaCrosse & Milwaukee after receiving bribes from the railroad's president, Byron Kilbourn.
[45] Stover (1978), p. 86. Stover (1978), pp. 88, 157, gives information about other Southern states and counties as well.
[46] Reed (1962), p. 197.
[47] Stampp (1990), p. 216.
[48] P. 209.
[49] In February 1857, for instance, Missouri state bonds collateralized more than two-thirds of Illinois bank notes. Economopoulos (1988), p. 253.
[50] Sylla et al. (1987).
[51] Although this meant an absence of a lender of last resort, some banks formed clearinghouses as an alternative. Examples include the New York clearinghouse, established in 1853, and the Suffolk Bank in New England, established three decades earlier. Hammond (1957), p. 554; Gorton (1985); Stampp (1990), p. 216; Calomiris and Kahn (1996); and Smith and Weber (1999). New York passed the first free banking statute in 1838, and other states soon followed. Atack and Passell (1994), tab 4.2, p. 105. Descriptions of the free-banking era appear in Rockoff (1974); Rolnick and Weber (1983); Ng (1988); Economopoulos (1988); Stampp (1990), p. 217; and Walton and Rockoff (2005), pp. 235-6. Nevins (1950), p. 187, reports that 678 new banks set up shop in the 10 years before 1857. In his magisterial work, Bray Hammond (1957), p. 572, suggests that becoming a banker might have been somewhat harder than becoming a bricklayer in the free-banking era, but not much.
[52] Discussions of bank lending and collateralization appear in Miller (1924), p. 322; Smith and Cole (1935), p. 133; Nevins (1950), pp. 187-8; and Calomiris and Schweikart (1996), p. 822. Miller (1924), pp. 327-9, and Sylla (2003) discuss the workings of the call-money market. Stampp (1990), p. 215, notes even more tangled relationships in which railroads sold eastern bankers land mortgages they had received in exchange for stock. Hugh Rockoff (1974) reports that Michigan let banks use land mortgages at face value as security, regardless of their true value. Likewise, Minnesota accepted railroad bonds at 95 percent of their face value even though they were nearly worthless. Atack and Passell (1994), p. 104.
[53] Smith and Cole (1935), p. 131. Stevens (1971), tab. 2, shows similar information by reporting the ratios of bank notes to bank specie, as well as bank specie to total specie.
[54] Edmund Dwight (1858), quoted in Miller (1924), p. 328.
[55] Hammond (1957), p. 696; Walton and Rockoff (2005), p. 236.
[56] Hammond (1957), p. 696; Rockoff (1974), p. 104; Schweikart (1987), p. 28; Atack and Passell (1994), p. 104; and Calomiris and Schweikart (1996), p. 831.
[57] Atack et al. (1982).

[58] Nevins (1950), p. 186.
[59] Nevins (1950), p. 182.
[60] Ratner et al., (1993), p. 168.
[61] Data are derived from Fogel and Engerman (1976). The data are from probate records; sample sizes are much larger for appraisals than for sales, with annual numbers ranging from 437 to 710 for appraisals and 30 to 100 for sales. The larger sample size for appraisals may help explain the smoother pattern of these prices.
[62] Diamond and Dybvig (1983) offer the pioneering example of this model.
[63] Wahl (2008). Spatial separation of banks could be the reason for a lack of coordination among depositors and thus the failure to overcome the first-come, first-served problem.
[64] See for example Gorton (1988), and Calomiris and Gorton (1991). Canova (1994), p. 107, referring to Wilson et al. (1990), concludes that some fundamental features of the macroeconomy could help predict panics, at least in retrospect. I argue (2008) that this model applied to the 1839 crisis as well.
[65] People were aware of the case before the decision became official. Data observed for March-April 1857 may therefore underestimate the true reaction.
[66] The per-acre value of farmland in the South exceeded that in the North at the time of the American Revolution. By 1850, however, the value of farmland and buildings in the South was less than half that in the North, and the per-acre value was only one-third. Even after the cotton boom of the 1850s, the per-acre value in the South was only 43 percent of the Northern value. Wright (1987), pp. 858-9.
[67] Wright (1978), p. 45.
[68] Wright (2003), p. 540.
[69] Northerners moved around, of course. The point is that their main asset was immobile. Even if people moved, they had an interest in enhancing immobile asset values because any improvements would be capitalized in the asset sale price.
[70] For dollar estimates, see Fogel (1989), pp.81-89, and Ransom and Sutch (1977), pp. 52-3. Certainly yeoman farmers existed in the South as well, many of whom owned no slaves. See for example Weiman (1987).
[71] Hutchinson (1930). pp. 208-9, 246.
[72] Majewski and Tchakerian (2006), pp. 2-3.
[73] See Johannsen (1961), pp. 289-90, and Potter (1976), pp. 171-2. Potter (pp. 152, 170) and other scholars suggest that Douglas wrote the bill advocating popular sovereignty as a sop to Southerners in exchange for a greater likelihood of a transcontinental railroad being built near lands that Douglas owned.
[74] Wright (2003). Wahl (2007), pp. 110ff., offers data showing the inexorable westward movement of the slave population. David Weiman's study of the market in public lands in Georgia suggests that wealthy slave owners made up a disproportionate share of bidders at auctions, as they had the wherewithal to buy land ahead of using it. Weiman (1991). Opening a territory to slavery might not have brought slaves in as neighbors immediately, then, but frontier settlers could reasonably have expected them later.
[75] Goodwin (2005), p. 167.
[76] Pritchett (2001), pp. 467-8, finds that about half the slaves migrated from the exporting to the importing areas of the South with their masters and half were sold.

[77] Berwanger (1967), pp. 1 and 4, notes the prevalence of racism among Northerners. Dew (1975) and Wish (1939) document the growing fears of slave insurrection during 1856-57. Adler (1991), pp. 175-77, goes so far as to claim that St. Louis declined in importance relative to Chicago because eastern capitalists became reluctant to invest in a slaveholding state.

[78] US Bureau of the Census, US Department of Commerce, *Historical Statistics of the United States: Colonial Times to 1970* (1975), table A195-209.

[79] After *Dred Scott*, people even feared that the Supreme Court might declare that states had no say in determining whether slavery could exist within their borders. Another case – *Lemmon v. People*, 20 NY 562 (1860) – is sometimes referred to as the "second *Dred Scott*" case for this reason. Lemmon was working its way through the New York courts just before the Civil War and may have landed on the docket of the U.S. Supreme Court had not the War intervened. In *Lemmon*, slaves traveling circuitously from Virginia to the lower South were freed by a writ of habeas corpus while in New York. The slaveowner claimed that his property rights should have been protected.

[80] Gates (1939), pp. 163, 173, 179.

[81] Wahl (2007) offers population figures by region. In 1860, for example, 69 percent of the white population lived in the North.

[82] Fehrenbacher (1978), p. 188.

[83] For details, see Donald (1960), pp. 278-311; Potter (1976), pp. 208-13; and Fehrenbacher (1978), p. 193.

[84] The movement culminated in the election of proslavery delegates to a constitutional convention. Free-soilers had refused to participate in what they considered a fraudulent process. Pro-slavers began meeting in September in Lecompton but suspended operations until after the October congressional election. Newly appointed territorial governor Robert Walker then installed a legally elected antislavery legislature which drafted its own constitution. The Kansas citizenry voted on the Lecompton constitution in December and on the antislavery constitution a few days later. In a costly move, Stephen Douglas opposed the Lecompton accord, not because it supported slavery, but because it was not the wish of the majority. In the end, Congress adopted William H. English's compromise, which proposed that Kansas be admitted under the Lecompton constitution, but only after Kansas voters approved standard federal land grants for the state. If the Kansas voters rejected the federal land grants, which they later did, then Kansas could not be considered for admission until its population had reached the federal ratio for one representative in Congress. Kansas was later admitted to the Union on January 29, 1861 (ch. 20, 12 Stat. 126). Fehrenbacher (1978), pp. 458-62, 465-9, 479-82.

[85] A brief perusal of contemporaneous newspapers shows they were full of editorials and letters expressing fear that the *Scott* decision opened the territories—indeed, the entire nation—to slavery. Even the prospect of Oregon becoming a slave state was a serious one. See for example Letter to the Editor, *The Independent* (Harrisonburg, La.), March 19, 1857, p. 2; Letter to the Editor, *The National Era*,, March 26, 1857, p. 51; and "Oregon to be a slave state," *Farmers' Cabinet* (Amherst, N.H.), Apr. 2, 1857. All articles can be obtained via *ProQuest Historical Newspapers*.

[86] Nevins (1950) relates this episode at 181ff.

[87] Calomiris and Schweikart (1996), pp. 816-7, contains a detailed account of Ohio Life's dealings. Also see Van Vleck (1943), p. 65, and Stampp (1990), p. 222.
[88] Nevins (1950), p. 190.
[89] As Buffett put it, "[Y]ou only find out who is swimming naked when the tide goes out. Chairman's letter "To the Shareholders of Berkshire Hathaway Inc.," printed annual report 2001**,** reprinted at http://www.berkshirehathaway.com/2001ar/2001letter.html.
[90] The Tompkins Square protest occurred on 11 November. Stampp (1990), pp. 226-8.
[91] Stampp (1990), p. 218, *Historical Statistics of the U.S.*
[92] Gerhard (2006).
[93] http://www.texasalmanac.com/history/early/1857Population.pdf.
[94] John Majewski cogently points out that the Freeport doctrine later created uncertainty for Southerners, likely changing their migration patterns in the post-*Scott* years as well. E-mail from John Majewski, Associate Professor of History, University of California, Santa Barbara, to author (14 March 2006).
[95] *The Independent* (Mar 11, 1858), vol. 10, iss. 484, online in *ProQuest Historical Newspapers*.
[96] Gates (1951), p. 254.
[97] Fishlow (1965), p. 203.
[98] The Panama Railroad was completed in 1855.
[99] Smith and Cole (1935), p. 106, and Calomiris and Schweikart (1996) use other less-detailed data sources to map similar patterns, focusing primarily on the time leading up to the crisis and the crisis itself but not on subsequent periods.
[100] Bagley (2002) contains an account of the massacre.
[101] Regressions on individual stock prices for companies that existed throughout the entire period yield results similar to those of the region in which they are located.
[102] The constant pertains to the period before the panic of 1854. D (1854 panic) takes the value one for the stock index values during the period of the 1854 panic (12 December 1854 to 22 February 1855). D(post 54-*dred*) equals one for the period 3 March 1855 to 14 March 1857. D(*dred*) equals one for the period after the court issued the *Dred Scott* opinion until the failure of Ohio Life (21 March to 22 August 1857). D(1857 panic) equals one for the period of the 1857 panic (29 August to 30 December 1857), and D(post-1857) equals one for January 1858 to the end of the data series at 12 December 1859).
[103] Bonds uniformly had par value equal to 100. I constructed the Eastern index from bonds issued by the following railroads: Cheshire, Concord, Eastern, Grand Junction, Ogdensburg, Old Colony, Passumpsic, Rutland, Vermont&Massachusetts, and Vermont Central.
[104] Daniel Drew became a member of the Erie board of directors in 1857 and used his position to manipulate the value of the stock. He later engaged in fraudulent stock transactions, along with Jay Gould and Jim Fisk, to keep the railroad out of the hands of Cornelius Vanderbilt. Byron Kilbourn, president of the LaCrosse & Milwaukee, was found guilty of bribery in obtaining a state land grant for the railroad. Stover (1978), pp. 50-1, 153.

[105] The mismanagement at the Bank of Pennsylvania was well-known at the time. See for example "The financial position of New York," *The Independent* (Feb. 25, 1858), vol. 10, iss. 482, p. 5, online in *ProQuest Historical Newspapers*.
[106] Hughes (1956), Kindleberger (1978), p. 115.
[107] Calomiris and Schweikart (1991), p. 809. Calomiris and Schweikart offer a detailed account of the reaction to the crisis of banks in various states in their landmark study. Bodenhorn (2003) contains a fascinating account of a single bank in Watertown, NY, during this period. He found, perhaps not surprisingly, that the bank was much more willing to renegotiate with customers who had enjoyed long-term relationships.
[108] Smith and Cole (1935), p. 130.
[109] Van Vleck (1943). Also see "A financial panic," *Saturday Evening Post* (Oct. 10, 1857), p. 2, online at *ProQuest Historical Newspapers*.
[110] A call for ending the usury laws appeared in Office of the Mercantile Agency (1857, rep. 1963). Miller (1924), p. 321, refers to similar efforts by the New York Chamber of Commerce. See Memorial of the Chamber of Commerce of New York, *Bankers' Magazine and Statistical Register* (April 1858), vol. 7, iss. 10, pp. 832-3, online at *ProQuest Historical Newspapers*.
[111] Smith and Cole (1935), chart 45, p. 130.
[112] Hammond (1957), p. 712; Stampp (1990), p. 224.
[113] Smith and Cole (1935), p. 167.
[114] Jan. 1858, vol. 10, iss. 1, pp. 23-4, online at *ProQuest Historical Newspapers*.
[115] Nevins (1950), pp. 195-6, 224-6.
[116] Figures were reported by New York commercial agency Tappan and McKillop in *Bankers' Magazine*, cited in Nevins (1950), pp. 196-7. Also see Calomiris and Schweikart (1996), tab. 2, p. 814, for commercial failures by state from January 1857 to March 1858, originally reported in Evans (1859).
[117] For discussions of the independent treasury, see Timberlake (1960) and Stevens (1971).
[118] Timberlake (1960), p. 101, discusses this episode. The federal debt mushroomed from $29 million in 1857 to $65 million in 1860. Nevins (1950), p. 187.
[119] Kindleberger (1978), p. 180, Timberlake (1960), p. 101.
[120] Reported in the *Congressional Globe* and quoted in Timberlake (1960), p. 101
[121] Sylla et al. (2006) compile evidence about the trans-Atlantic integration of capital markets as early as 1845. Also see Bodenhorn (1992).
[122] Nevins (1950), p. 191; Hughes (1956).
[123] Nevins (1950), p. 176, states that the panic was not a huge financial convulsion in and of itself, but psychologically it helped tear the nation apart. Before 1857, the North seemed invincible. The panic proved otherwise. Walton and Rockoff (2005), p. 238, note that the panic aggravated sectional tensions, emboldening the South to say it was better off without the North. Also see Huston (1987), p.16, and Stampp (1990), pp. 229-300.
[124] Calomiris and Schweikart (1991) describe coordination in some states, for example. Note that public intervention actually might prolong financial crises or make them more likely. If people – or institutions – know they will be rescued when they suffer a loss, they will take risks they would otherwise have avoided. Not only that, they have no

incentive to monitor the behavior of those to whom they have entrusted their money. The end effect is to reward risky behavior and to penalize prudence -- a classic example of moral hazard.

[125] Nevins (1950), p. 193, Kindleberger (1978), p. 211.

[126] Quoted in Markham (2002), p. 202. In a somewhat ominous echo, Brazilian president Luis Inacio Lula da Silva recently told British prime minister Gordon Brown, "[T]his is a crisis caused and encouraged by the irrational behaviour of white people with blue eyes." See http://news.bbc.co.uk/2//hi/business/7967546.htm.

[127] Quoted in Egnal (2004), originally from Monroe and McIntosh (1971-99), vol. 6, p. 157.

[128] *Congressional Globe*, 35th Congress, 1st Session, p. 819. Quoted in Huston (1987), p. 122.

[129] Hammond gave the speech on 4 March 1858. This excerpt appears at http://www.sewanee.edu/faculty/Willis/Civil_War /documents/HammondCotton.html.

[130] *DeBow's Review* (Dec. 1857), quoted in Nevins (1950), p. 196.