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A Test of Competing Hypotheses

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ABSTRACT

Between 1911 and 1931, 47 of the 48 states adopted state securities, or "blue sky," laws. This paper employs an event history analysis to analyze public interest, public choice, and ideological explanations for the enactment of blue sky laws. The data suggest that the decision to adopt a blue sky law was heavily influenced by the strength of progressive lobbies. However, the type of law adopted was more strongly influenced by the prevalence of small banks which faced competition for depositors' funds from stockbrokers. I also provide evidence that more stringent blue sky laws increased small bank profits.

I. *Introduction*

Between 1911 and 1931, 47 of the 48 states adopted statutes regulating the sale of securities. The stated justification for these state securities laws was to prevent the sale of fraudulent securities, particularly to unsophisticated investors. They are known as "blue sky" laws, purportedly because one of their supporters claimed that many securities salesmen were so dishonest that they would sell "building lots in the blue sky."[1]

Fraud and attempts to combat it exist in all markets. What, then, explains the sudden appearance of blue sky laws in virtually all states during a two-decade period? This paper analyzes three explanations drawn from the literature on the blue sky laws. The first is a public interest hypothesis: securities fraud increased in the early twentieth century and the blue sky laws were a reaction. The second is a public choice story in which small banks agitated for blue sky laws as a means of reducing competition for depositors' funds from securities firms.[2] The third consists of two related political hypotheses: the blue sky laws were adopted at the behest of agrarian or progressive lobbies to curtail the power of financiers.[3]

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[1] See Louis Loss and Edward M. Cowett, Blue Sky Law 7 n.22 (1958).

[2] See Jonathan Macey and Geoffrey Miller, Origin of the Blue Sky Laws, 70 Tex. L. Rev. 347 (1991).

[3] Kroszner and Strahan explore the same categories of explanations for banking reform in the 1990s. See Randall S. Kroszner and Philip E. Strahan, Obstacles to Optimal Policy: the Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms, in

This paper uses event history analysis to examine factors that may explain which states would be early adopters of blue sky laws and which states would be later adopters. I analyze variables that act as proxies for the extent of securities fraud and the lobbying strength of farmers, progressives, small-town banks, and securities firms and ask whether state-to-state variation in these variables is associated with differences in the timing of blue sky law adoption.

The results suggest that the decision to adopt a blue sky law was partly determined by the prominence of small banks and partly by the strength of broad-based coalitions. However, the choice of the type of blue sky law was influenced principally by the relative influence of small banks and stockbrokers. The former preferred "merit review" statutes that gave the administrator substantial discretion to disallow public offerings, while the latter preferred statutes that targeted only fraudulent offerings. I also present evidence suggesting that merit review statutes did, indeed, help small banks. The findings are broadly consistent with Mark Roe's contention that a combination of self-interest and ideology explain early twentieth century financial regulation.[4]

The causes of the blue sky laws should be of interest to lawyers today. These laws were the first substantial attempt to regulate securities markets in the United States and set the stage for federal regulation in the 1930s. The standard view among securities practitioners and scholars is that regulation was a reaction to market excesses.[5] Sellers in the unregulated market failed to inform buyers adequately of the nature of the securities being offered, necessitating government intervention. Other observers, by contrast, see in the rise of the regulatory state in the early twentieth century a concerted effort by businesses to use the political process to curtail competition.[6] The late nineteenth century produced many technological and institutional changes that created a nationwide market in which large organizations competed. These organizations

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Frederic S. Mishkin, ed., Prudential Supervision (forthcoming).

[4] See Mark J. Roe, Strong Managers, Weak Owners: The Political Roots of American Corporate Finance (1994).

[5] See, e.g., Michael E. Parrish, Securities Regulation and the New Deal 6-7 (1970).

[6] See, e.g., Butler Shaffer, In Restraint of Trade: The Business Campaign Against Competition, 1918-1938 (1997).

struggled to reduce the intensity of competition, turning to government when private efforts failed. Still others view pressure for regulation as a consequence of ideological commitments that are not purely self-interested.[7] Learning what we can about the early history of the regulatory state can help to sort out these competing views.

The remainder of the paper is organized as follows. Part II briefly describes the blue sky laws. Parts III, IV and V discuss the public interest, public choice, and political hypotheses, respectively. Part VI describes the empirical tests. Part VII concludes.

II. *A Description of the Blue Sky Laws*

The first blue sky law was adopted in Kansas in 1911, in significant part through the efforts of the state's banking commissioner, J.N. Dolley.[8] The statute required registration of securities and securities salesmen. Prior to selling a security in Kansas, the issuer had to file an application detailing financial and narrative information about its business. No sales could be made unless the banking commissioner (the agent designated by the statute to receive these filings) approved the offering.

The statute gave the banking commissioner extraordinarily broad discretion to approve or reject offerings. The commissioner could reject an offering if he concluded that the issuer "does not intend to do a fair and honest business" or "does not promise a fair return on the stocks, bonds, or other securities to be offered for sale."[9] This broad authority came to be known as "merit review." Dolley, the banking commissioner, was not reluctant to exercise this authority. In his first annual report on the operation of the statute, Dolley noted that his office approved fewer than 7% of applications to sell securities in Kansas.[10]

The Kansas law quickly spread. In 1912 and 1913, ten states adopted statutes similar to

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[7] See Roe, supra note xx, at 28-32 (discussing populism as a force for financial regulation).

[8] The discussion in this section draws on Loss & Cowett, supra note xx, and Macey & Miller, supra note xx.

[9] See Kan. Sess. Laws 1911, ch. 133, sec. __.

[10] See Loss & Cowett at 9.

the Kansas statute, in each case providing for merit review. Other states rejected merit review on the Kansas model but nevertheless gave the administrator the authority to deny permission to sell securities if he concluded that the offering was fraudulent. Others, including important centers of the securities industry like New York and New Jersey, adopted statutes that prohibited fraud but did not require pre-clearance of an offering. Table 1 provides the dates of adoption of each state's blue sky statute.

The blue sky statutes had a few common features that are worth noting. They put the most stringent restrictions on high-risk (and potentially high return) securities. Thus, many blue sky laws forbade the sale of any security by a company that had previously issued securities in exchange for patents, goodwill, or other intangible assets unless the administrator concluded that the intangibles were "fairly" valued on the company's books.[11] Others singled out for greater scrutiny a class of "speculative" securities, including those whose assets consisted in large measure of intangibles, mining claims or undeveloped real estate, or those which, in the opinion of the administrator, were otherwise speculative.[12] Regulations adopted by Michigan's securities commission noted that it would normally be necessary for the commission to get an expert appraisal of assets of companies in "the motor industry" at the company's expense.[13]

There are also some indications that banks were active in the consideration of blue sky laws. Many states followed Kansas's lead by appointing the state's banking commissioner as the sole or lead administrator.[14] This was particularly prevalent among states that adopted merit review; [8] of the 11 merit review states put the banking commissioner in charge. The statutes uniformly exempted bank securities from registration, and in some cases exempted any securities sold by a bank (presumably including those underwritten by banks). Others exempted banks

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[11] See, e.g., Alabama Acts 1919, No. 660, sec. 3, p. 947; New Mexico Laws 1921, Ch. 44, Sec. 5, p. 98.

[12] See, e.g., North Dakota Laws 1915, Ch. 91, Sec. 1.

[13] See General Report of Securities Commission, reprinted in The Annotated Blue Sky Laws of the United States 322, 325 (John M. Elliott ed. 1919)

[14] See, e.g., Kentucky Laws 1920, Ch. 125, Sec. 1, p. 582; Rhode Island Laws 1921, Ch. 2068, Sec. 2(a), p. 119.

from registration as brokers or dealers.

III. *The Public Interest Hypothesis*

One standard economic account of regulation is as a solution to market failure. A well-informed planner may be able to improve on the market's allocational outcomes in the presence of significant externalities. I will refer to this as a public interest explanation. A persuasive public interest explanation requires that the regulation be efficient in the sense of producing net social wealth.

The leading legal treatise on the blue sky laws provides a straightforward public interest explanation.[15] As securities markets developed, it became apparent that securities sales provide exceptional opportunities for fraud. The combination of a growing market for corporate securities and the relaxation of nineteenth-century *laissez-faire* attitudes set the stage for the adoption of blue sky laws in the early twentieth century. Joel Seligman provides a more historically detailed public interest explanation. He argues that the early twentieth century witnessed a "fraud wave" in which the proportion of dishonest sellers increased dramatically.[16] These explanations are economically naive in the sense that they do not explain why investors would participate in markets rife with fraud. However, one can plausibly argue that prohibitions on fraud are efficient because they reduce the cost of contracting, and with a bit more effort one might argue that the government can engage in some limited *ex ante* screening of securities sellers at lower cost than the sellers themselves could develop a reputation for honesty.

The evidence offered in support of the existence of widespread fraud in early twentieth-century securities markets, however, is extremely thin. The first piece of evidence consists of the claims of the blue sky laws' proponents that fraud was rampant. This, obviously, is of no weight. We would not expect proponents of a regulatory statute to admit self-interest or other non-public-regarding motivations. They would claim to be combating fraud no matter what their actual motivations.

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[15] See Loss & Cowett at 3-4.

[16] See Joel Seligman, The Historical Need for a Mandatory Corporate Disclosure System, 9 J. Corp. L. 1 (1983).

The second piece of evidence is the fact that once blue sky laws were in place, the state officials who passed on the soundness of proposed offerings rejected a substantial percentage of these proposals. This, too, provides no basis for inferring fraud. Under merit review statutes, the administering officials had almost unlimited discretion to reject a filing. The fact that they rejected many applications, therefore, shows only that they believed it a good idea to do so. What motivated them to believe so–a correct inference of fraud, a misunderstanding of securities markets, an antipathy to certain sellers, or a desire to prevent the sale of high-risk, high-return investments–we do not know. But without some evidence that the administrators' principal motivation was to prevent fraud and that they were competent to do so, evidence of rejection rates counts for nothing.

More relevant evidence, including contemporary press accounts and court decisions, cut against the claim that fraud was unusually prevalent in securities markets around the time of the blue sky laws. The most common "fraud" claim of that era concerned the practice of "watering" stock–that is, selling stock for a price that implicitly valued the firm's assets at much more than their book value.

The argument that selling stock above its book value is fraudulent, however, represents conceptual confusion about the determinants of the market price of a security. Accounting value, typically based on cost, need bear no relation to market value. A divergence between sales price and book value, then, is irrelevant. A supplemental and less naive argument was that the accounting statements were themselves misleading. Some firms' balance sheets attributed significant value to intangible assets such as patents or mining claims or carried some assets at market value rather than cost. The common provisions in blue sky laws that discouraged companies from attributing value to intangibles show that legislators were concerned with the practice. The argument that it is fraudulent to attribute value to intellectual property or other intangibles, however, is also unpersuasive and reflects conceptual confusion about the determinants of market value. The market-versus-cost problem also reflects the fact that accountants of that era did not universally agree about when mark-to-market accounting was appropriate. A dispute about accounting conventions is not the same thing as fraud.

A final drawback of the public interest hypothesis is that it cannot account for the pattern

of state adoptions of blue sky laws. It is not plausible that the social costs of securities fraud were higher in Kansas, Arizona, Louisiana, and Vermont (the first four states to adopt blue sky laws) than in New York, Pennsylvania, and Connecticut (among the last adopters). There should, moreover, be economies of scale in fraud detection and punishment, which would also imply that states with larger financial markets should have been the first to adopt blue sky laws under the public interest hypothesis.

IV. *The Public Choice Hypothesis*

Another economic theory of regulation posits that regulation is the outcome of a process of interest group bidding for government-provided wealth transfers. Groups that can more effectively solve free rider problems (often producer groups) obtain favorable regulation at the expense of more diffuse groups (typically, but not inevitably, consumers).

Macey and Miller offer a public choice account of the adoption of blue sky laws.[17] They argue that small, generally state-chartered banks and their regulators were the main forces behind the blue sky laws. These banks hoped that the blue sky laws would "stifle[] competition for the funds of potential depositors."[18] Macey and Miller provide qualitative evidence showing that small banks lobbied intensively for blue sky laws and were opposed by securities firms and money-center banks. The relative lobbying strength of these groups, then, may explain variation in the timing and strictness of state blue sky statutes.

It is just as possible, of course, that state securities regulation could have been beneficial to the securities industry itself by raising barriers to entry.[19] The investment bankers' trade group, the Investment Bankers Association of America (IBAA), appreciated this possibility and had no objection to legislation that would make it more difficult for "unscrupulous" bankers to enter the business. Investment bankers did not, however, view the Kansas-style statutes as beneficial. The IBAA arranged and financed litigation seeking to have the blue sky laws

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[17] See Macey and Miller, supra note xx.

[18] See id. at 365.

[19] This appears to have been true for the first of the federal securities law. See Paul G. Mahoney, The Political Economy of the Securities Act of 1933, 30 J. Legal Studies 1 (2001).

declared unconstitutional. At the same time, the association and its members lobbied intensively for a different style of blue sky law that would provide only for ex post punishment of sellers of fraudulent securities. This effort was partly successful, as a number of states adopted statutes patterned on the IBAA model.

The principal evidence that Macey and Miller present in support of the public choice hypothesis is a detailed discussion of rural banks' and bank regulators' efforts to secure enactment of blue sky laws and the securities industry's efforts to block enactment or craft the statutes to the industry's liking. I will not repeat that effort, but will discuss in more detail the possibility that small banks were the primary force behind the blue sky laws. The case for the public choice hypothesis rests largely on its potential role in maintaining a highly fragmented banking system.

One of the hallmarks of the U.S. banking system is its fragmentation.[20] This was even more true in the early twentieth century. Most states had restrictions on operating across state lines. The dominant model of banking was a "unit banking" model under which a bank was limited to a single place of business. Branching was permitted in only a handful of states, and often within only a limited geographical area. Banks could, for example, establish multiple branches within New York city but not in rural areas. The consequence was that there were a great many banks, but limited competition among them. Most towns, even very small ones, had a bank, and outside the cities those banks often faced little or no competition within their limited geographical market.

In part, these geographical monopolies were a natural consequence of low population densities. Anti-branching rules made it impossible for banks from larger areas to service small towns, but those towns were often too small to support more than one bank. It is also true, however, that state banking laws gave banking departments broad discretion to reject applications to create new banks, particularly when a community was already served by a bank. Alabama's new banking law of 1911, for example, provided that after proposed incorporators of

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[20] The discussion in this section draws on Eugene Nelson White, The Regulation and Reform of the American Banking system, 1900-1929 (1983) and Eugene Nelson White, The Political Economy of Banking Regulation, 1864-1933, 62 J. Econ. Hist. 33 (1982).

a new bank filed their organizational documents with the superintendent of banks,

> . . . it shall be the duty of the superintendent of banks to ascertain . . whether the character
> and general fitness of the persons named as stockholders . . . are such as to command the
> confidence of the community in which such bank is proposed to be located . . . . Any bank
> doing business in the community or any reputable citizen in the community, may file with
> the superintendent of banks an objection to the incorporation of the proposed bank on the
> ground that the character and general fitness of the persons named as stockholders . . . are
> not such as to command the confidence of the community . . . .[21]

Connecticut's statute not only required a public hearing on any proposed incorporation of a bank, but also mandated advance notice of the request for incorporation to any bank already doing business in the area in which the proposed bank was to operate.[22] It appears, then, that incumbent banks in small towns had some ability to block new entry.

The existence of a parallel federal banking system did not affect the competitive position of small-town banks. The capital requirements for national banks–a minimum of $50,000 for towns with a population of 6,000 or less and a minimum of $100,000 otherwise–were more stringent than typical state levels and too great for many small-town banks.[23] National banks were not permitted to operate branches, with the exception that state banks operating branches were not required to close them if the bank converted to a national bank.

The business of these small banks, however, was precarious. Their markets were almost exclusively local, so they were subject to local economic shocks as well as broader downturns. They could be very small–with total deposits measured in the tens of thousands of dollars–and accordingly faced high average costs. They must have relied on their territorial monopoly to be

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[21] Banking Law of Alabama, Sec. 10.

[22] See Conn. Laws 1913, Ch. 194, Sec. 4.

[23] National Bank Act, sec. 7, 13 Stat. 101 (June 3, 1864), as amended by Act of March 14, 1900, 31 Stat. 48, codified as amended at 12 U.S.C. 5138. The Comptroller had discretion to permit a capital of $25,000 for banks in areas with a population under 3,000. Id. Redlich concludes that "[N]ew communities were often unable to carry a bank of that size [$25,000 capital] and so in many cases they chose instead to establish a state bank." See Fritz Redlich, The Molding of American Banking 178 (1968).

able to pass those costs on to borrowers and depositors. Moreover, the prospect of even a single customer withdrawing $1,000 to purchase a corporate bond would have been cause for alarm. Small banks, considered as a group, would have had an interest in retarding the growth of securities market. To the extent that capital flowed from the countryside to the manufacturing enterprises of the cities, small-town banks wished to gather the funds in the first instance, then deposit those funds with their city correspondents, who in turn might extend short-term credit to businesses or purchase their securities. The existence of a nationwide market for securities would make it easier for savers to bypass the banks.

To what extent, however, were rural customers able to bypass local banks? Clearly, they could have invested funds in excess of their short-term needs with distant brokers (or distant banks, for that matter) by mail. Blue sky laws would have had little impact on such business. Given contemporary understandings of legislative jurisdiction, a midwestern state's blue sky law would not have been understood to apply to the transactions of a local resident who held funds on account with a New York broker and traded in the New York stock and bond markets.

The statutes did, however, apply to brokers who may have traveled to rural areas to solicit sales. The historical literature does not extensively examine door-to-door securities selling in this period (unlike the 1920s, when even major investment banks employed traveling salesmen and the practice prompted considerable comment).[24] Door-to-door selling was an important aspect of retail distribution of consumer goods during this era, however, and it is reasonable to think that brokerage houses followed the practices of other retail businesses.[25] For blue sky laws to have provided a substantial benefit to rural banks, then, requires that we assume both that brokers traveled to rural areas to sell securities and that reducing this practice would have diminished securities investing in rural areas (rather than merely causing investors to do their business by mail with out-of-state brokerage houses). These are strong, but not implausible,

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[24] For a discussion of door-to-door securities sales during the 1920s, see Mahoney, supra note xx, at 6-7.

[25] For a discussion of door-to-door retail selling in the late 19th and early 20th centuries, see Timothy B. Spears, "All Things to All Men": The Commercial Traveler and the Rise of Modern Salesmanship, 45 Am. Q. 524 (1993).

assumptions.

Macey and Miller do not consider another issue, which is whether banks had an incentive to retard the growth of securities markets to keep their borrowers from issuing securities as an alternative to bank loans. This seems unlikely, however, because banks of the early twentieth century did not typically make long-term commercial loans. Their principal business was making short-term, self-liquidating loans to finance the movement of commodities. Banks did not compete heavily with securities markets as suppliers of long-term capital.

A final puzzle is the fact that the blue sky laws quickly spread to Canada. Manitoba enacted a statute shortly after Kansas, and eventually all Canadian provinces adopted blue sky laws. Canada, unlike the United States, has a highly concentrated banking system. If politically powerful small banks are the driving force behind blue sky laws, we should not observe such laws in Canada.

V. *Political Hypotheses*

A separate theory of regulation holds that ideology is the principal force behind policy shifts. Poole and Rosenthal, for example, argue that legislators can be meaningfully located on a simple left-right spectrum that, for present purposes, measures the preferred level of economic regulation.[26] They show that this measure of ideological preference does a good job of predicting roll-call votes in Congress.

It is important to recognize that ideological, or "political," explanations in some sense span the space between public interest and private interest (public choice) theories. A politician or political activist may have an altruistic, public-interested ideology. If so, she will favor policies that economists would applaud on normative grounds, and the ideological and public interest accounts of those policies will not be distinguishable.[27] At the other extreme, to the extent a voter's or politician's preference for extensive economic regulation represents a judgment that he will benefit, on average, from such regulations, ideology may reduce to self-

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[26] See Keith T. Poole and Howard Rosenthal, Congress: A Political-Economy History of Roll-Call Voting (1997).

[27] See Joseph Kalt and Mark Zupan, Capture and Ideology in the Economic Theory of Politics, 74 Am. Econ. Rev. 302 (1984).

interest plus logrolling. To take ideology as a category of explanations separate from public or private interest, therefore, is to accept that many political actors have complex motivations that lie somewhere between pure public and pure private interest.

There are other characteristic differences between the public interest, public choice, and political approaches as typically applied in the law and economics literature. Public interest explanations for economic regulation imply a normative judgment that the regulation was in fact an efficacious solution to an externality (or, at a minimum, that it would have been reasonable for policymakers to believe so). Public choice explanations, by contrast, are usually motivated by the view that the regulation is wealth-destroying. Political explanations are agnostic concerning the welfare implications of the regulation.

Public choice explanations focus on the economic interests of specific groups (mostly producer groups) with respect to a specific policy choice. Banks and insurance companies, for example, would be predicted to devote considerable resources to lobbying with respect to legislation to permit banks to sell insurance. However, they would be uninterested in legislation that attacked a conceptually similar issue in an unrelated industry–say, a proposal to ban drugstores from selling groceries. Political explanations, by contrast, argue that policy preferences are consistent across a variety of analogous choices. Public choice explanations also tend to view the free-rider problem as central to political action. Thus, they focus on groups that are small and have a lot at stake or groups that can overcome the free-rider problem by providing benefits to their members (such as trade associations or labor unions). Political explanations, by contrast, posit that broad-based coalitions with similar preferences can influence policy choices.[28] One might therefore say that political theories posit that ideology is a substitute for material incentives in solving the free rider problem and permitting collective action.

I focus here on two plausible ideological or political explanations for the blue sky laws. One sees them as an offshoot of agrarian hostility to finance, and the other as a part of the progressive movement.

A. *The Agrarian/Populist Hypothesis*

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[28] See Poole & Rosenthal, supra note xx.

Most of the early adopters of blue sky laws were midwestern and southern states. Supporters often described themselves as foes of big-city financiers and friends of farmers and other small borrowers who relied on bank credit.[29]

It is possible, then, that the blue sky laws were the result of populist politics. Beginning in the late nineteenth century, farmers and their allies attempted to create a viable third party, ultimately called the Populist or People's Party, to represent their interests.[30] James Weaver, the Populist presidential candidate in 1892, received 8.5% of the popular vote and carried Colorado, Idaho, Kansas, Nevada and North Dakota.[31] In 1896, the Populists nominated the unsuccessful Democratic candidate, William Jennings Bryan, and the party was never again an important independent force at the national level.

The Populists' policy focus, not surprisingly, was on increasing farmers' wealth. They advocated regulation of railroad tariffs in order to reduce the cost of bringing grain to market. They also, most notably, demanded expansion of the money supply in order to increase commodity prices and reduce the real burden of farm debt. This crusade brought Populists into direct conflict with financiers, who wanted to maintain a stable currency to protect the value of outstanding debt securities. Thus, Populism was, in part, an episode in an existing political struggle between agrarian and financial interests.

The Populist movement as a formal political program was dead by the time of the blue sky laws. However, populist rhetoric and ideas–particularly the antipathy to financiers that predated the Populist movement–survived in agricultural areas. Macey and Miller note that the availability of farm credit played an important role in debates over the blue sky laws. Farmers believed that money invested in securities was taken out of the banking system, where it could be lent to farmers and small business, and put into "unproductive" speculative activity. This argument has an extremely long pedigree–it was used as early as 1701 by those who wished to

[29] See Macey and Miller, supra note xx, at 365-70.

[30] For an overview of the populist movement, see Robert C. McMath, Jr., American Populism: A Social History, 1877-1898 (1993).

[31] Data taken from http://www.uselectionatlas.org/USPRESIDENT/frametextj.html, visited July 6, 2001.

regulate the newly-organized securities market in London.[32] The same argument played a role in debates over the federal securities laws in the 1930s.

Given the much smaller size, importance, and national scope of securities markets in the 1890s compared to the 1910s, it is not surprising that the blue sky laws did not arise during the height of the Populist movement. By 1910, however, securities markets were both larger and more visible throughout the country. Total corporate securities outstanding increased by over 150%, from approximately $19 billion to $50 billion, from 1900 to 1912.[33] This outstrips even the rate of increase during the 1920s. While the Populists saw Wall Street as a political threat because of its support for a stable currency, by the 1910s the threat was broader as investment in securities spread from the East coast.

In addition, the wave of corporate consolidation that created large firms of national scope reached its peak during the period 1895-1905. By the 1910s, there existed a substantial number of large firms that tapped the public securities markets for debt and equity financing. Firms such as U.S. Steel, Standard Oil, and International Harvester were household names and attracted a nationwide investor clientele. One of the hallmarks of agrarian views about finance was local self-sufficiency–the notion that capital created in rural areas should stay there. Investment in securities issued by distant corporate behemoths would have seemed deeply offensive.

Following the panic of 1907, complaints about the availability of farm credit became particularly heated. Southern and midwestern politicians, for example, criticized big-city banks for offering interest on the credit balances of their rural correspondent banks.[34] Banks outside the main cities held deposits with larger urban banks for purposes of check clearing, securities purchases, and interbank borrowing and lending. Critics, however, believed that these deposits

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[32] See Paul G. Mahoney, The Pernicious Art of Securities Regulation, 66 U. Chi. L. Rev. 1373, 1379 (1999).

[33] See Raymond W. Goldsmith, Financial Intermediaries in the American Economy Since 1900, pp. 224-25 (1975).

[34] See Brian C. Gendreau, Bankers' Balances, Demand Deposit Interest, and Agricultural Credit before the Banking Act of 1933: Note, 11 J. Money, Credit & Banking 506 (1979); Albert H. Cox, Jr., Regulation of Interest Rates on Bank Deposits 6-7 (1966).

siphoned off money that should be lend in the local economy. Virginia's Carter Glass, who played a central role in shaping the Federal Reserve Act of 1913 and the Banking Act of 1933, argued that money deposited by farmers and other rural businesses and households was "congested at the money centers for purely speculative purposes."[35] Glass attempted, unsuccessfully, to institute a federal ban on interest on demand deposits in the early 1910s (he finally succeeded in 1933). The rationale was to stop the perceived flow of funds from rural to money center banks.

B. *The Progressive Hypothesis*

An alternative political story identifies the blue sky laws as a progressive reform. They were adopted during a burst of economic and political regulation known as the Progressive Era. In the first two decades of the twentieth century, social reformers obtained state legislation on child labor, compulsory school attendance, workmen's compensation, and electricity rate regulation. They also pursued political reforms such as direct primaries, initiative and referendum procedures, and merit systems for state employees.[36] Theodore Roosevelt left the Republican party to run for President in 1912 as a Progressive Party candidate. Opposed by Wilson (Democrat) and Taft (Republican), Roosevelt won 27% of the popular vote.

In contrast to Populism, however, it is controversial whether and to what extent there existed an identifiable "Progressive movement."[37] Unlike the Populists, and notwithstanding Roosevelt's use of the term "Progressive," the progressives did not try to build a third party. Progressives came from both major parties and thrived on a decline in party loyalty and discipline after 1896.[38] Moreover, historians have found it difficult to define a specific set of policy goals that is characteristically "progressive." Some progressives focused principally on questions of political structure such as civil service and legislative reform. Others stressed

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[35] Carter Glass, An Adventure in Constructive Finance 60 (1927).

[36] See Fishback and Kantor, supra note XX, at 327.

[37] See Daniel T. Rogers, In Search of Progressivism, 10 Rev. in Am. Hist. 113 (1982).

[38] See Walter Dean Burnham, Critical Elections and the Mainsprings of American Politics (1970).

regulation of the labor market. Still others put primary emphasis on fighting monopolies. Finally, many of the policy ideas generated during the Populist movement lived on through the progressives.[39]

Most of the debate about the meaning of progressivism, however, is irrelevant for present purposes. No one disputes that the early twentieth century saw a rise of issue-oriented political coalitions that, after 1910, referred to themselves as "progressives." Although they may have lacked a coherent platform, they were united by a methodology that stressed "reform," which in practice often included the replacement of decentralized, market decisions with centralized, bureaucratic decisions.[40]

The blue sky laws could plausibly have been an outgrowth of the anti-monopoly ideology that was a part of progressivism. One common feature of progressive thought was a distaste for large economic units, whether or not these were monopolies in the economist's sense. Reformers frequently used terms such as "monopoly" and "trust" indiscriminately for their emotional rather than their analytical content.[41] Although the reasons are debatable, some progressives found in early twentieth century American finance the seeds of "monopoly."

Louis Brandeis's famous call for financial regulation, *Other People's Money*, argues that the financial industry is an "oligarchy."[42] The book opens with a 1911 quote from Woodrow

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[39] The degree of similarity between Populism and progressivism is the subject of another debate that need not be settled here. Compare Robert W. Cherny, Populism, Progressivism, and the Transformation of Nebraska Politics, 1885-1915 (1981), with Lawrence Goodwyn, The Populist Moment: A Short History of the Agrarian Revolt in America (1978).

[40] See Robert H. Wiebe, The Search for Order, 1877-1920 (1967). This, too, is controversial. Richard Hofstadter takes the opposite view, seeing progressivism as an attempt to uphold individualism despite the growth of large economic and social organizations. See Richard Hofstadter, The Age of Reform (1955). Hofstadter's interpretation, however, is hard to square with the progressives' love of bureaus and committees and their skepticism about market-determined outcomes.

[41] See Martin J. Sklar, The Corporate Reconstruction of American Capitalism, 1890-1916: the Market, Law, and Politics 183-84 (1988).

[42] Louis D. Brandeis, Other People's Money and How the Bankers Use It (1967 [1914]).

Wilson that "The great monopoly in this country is the money monopoly."[43] Congress held

hearings in 1912, now known as the Pujo hearings, to investigate the "money trust." Clearly, the

blue sky laws were adopted in the middle of a series of attacks on the financial industry as a

"monopoly" or "trust," and those concepts were an important part of progressive rhetoric.

VI. *Evidence from the Timing of Adoption*

Following Stigler and others, I assume that the timing of adoption of a regulatory statute

is a proxy for the intensity of a state's desire to regulate the relevant activity, with earlier adopters

being the most eager.[44] The same motivation underlies the use of event history analysis in other

regulatory contexts.[45]

A. *Methodology*

I employ an event history model that estimates the effects of a set of (mostly) time-

dependent covariates on the probability of adoption of a blue sky statute, given that adoption has

not already occurred.[46] The model is discrete-time and treats a state-year as the unit of analysis.

My sample consists of 237 state-years beginning in 1910 and continuing, for each state,

until the adoption of a blue sky law. Only state-years for which the relevant state's legislature

was in session, and therefore in which a law could be adopted, are included. Two states,

Delaware and Nevada, had not yet adopted a blue sky law by 1930. Observations on those states

are included up to 1930. Event history analysis is designed to deal successfully with right-

truncated cases such as these.

The dependent variable is coded "0" for each state-year in which a law was not adopted

and "1" for each state-year in which a law was adopted. Dates of adoption were determined from

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[43] Id. at 1.

[44] See Stigler, The Theory of Economic Regulation, Bell J. Econ.

[45] See, for example, Price V. Fishback and Shawn Everett Kantor, The Adoption of Workers' Compensation in the United States, 1900-1930, 41 J. L. & Econ. 305 (1998); Eliza K. Pavalko, State Timing of Policy Adoption: Workmen's Compensation in the United States, 1909-1929, Am. J. Soc. 592 (1989).

[46] For a description of hazard rate models and other methods of event history analysis, see Paul D. Allison, Event History Analysis: Regression for Longitudinal Event Data (1984).

state session laws. The effect of the independent variables on the log-odds of adoption is analyzed using a logistic regression.

B. *Covariates*

The covariates can be separated into groups that are designed to act as proxies for the incidence of securities fraud, the political influence of small banks, the strength of populist and progressive groups, and other conditioning variables.

My measure of fraud incidence is the number of securities fraud cases in each state during the decade ending on January 1, 1911. I began with all cases included in the LEXIS/NEXIS state securities law database for the relevant dates. A few of those cases are clearly in the database by mistake because of the use of words like "stock" and "bond"–they include cases involving livestock and surety bonds, for example. I exclude those cases. Others involve promissory notes made in connection with face-to-face commercial transactions, and I exclude those as well. The most difficult cases to categorize are those involving simple contract disputes between a customer and a broker or bank. Many of these cases, for example, involve the question whether the broker has the right to sell securities held for the customer's account when the customer fails to meet a margin call. Although they are presented as contract or fiduciary duty claims, under current law the customer might try to state some claim under the federal securities laws. I accordingly define the fraud variable in two ways, a "narrow" variable that excludes these contract disputes and a "broad" one that includes them. None of the results described below are sensitive to which of these variables is used.

The number of litigated cases is, of course, an imperfect measure of the underlying incidence of fraud. Differences among states may also be a function of the quality of the court system and the strictness with which particular states applied the doctrinal limitations on fraud claims. It is, however, the only objective measure available.

One group of covariates serves as proxies for the political influence of small banks. There are two different ways to try to measure this influence. The first is to look at the relative prevalence of small banks in a given state. Kroszner and Strahan, for example, measure the percentage of banking assets held by small banks (those below the median in asset size). For my period of interest, however, the standard compilations of banking data contain that information

for national, but not state-chartered, banks.

I accordingly consider state-chartered banks as a rough proxy for small banks. Smaller banks tended to operate under a state charter, while larger banks tended to operate under a federal charter, although the correlation is not perfect. I measure the percentage of banking assets held by state banks as well as the percentage of banks that operated under a state charter.

A different approach is to look for evidence of an regulatory environment favorable to small banks. Accordingly, I define two dummy variables that indicate whether the state's banking statutes (1) permitted branch banking (small banks were strongly opposed to branching), and (2) created a deposit insurance system (small banks were less well-capitalized and accordingly supported deposit insurance). Because many state statutes were silent on the question of branching and the decision to permit branches was made by the state regulators, I use as an alternative to the first of these variables the percentage of banks actually operating branches.

I also use the results of a 1909 Comptroller of the Currency survey of the rate of interest paid on savings deposits. These data cover only a single year. They do, however, provide interest rates for the principal cities separately, permitting calculation of the rates paid by banks in smaller cities and rural areas, which is the measure I use. Unlike the other variables, however, the hypothesized direction of the effect on blue sky law adoption is not clear. The more a state's regulatory system protected small banks from local competition, the lower the interest rate those banks could offer. On the other hand, the greater the competition small banks faced from securities firms, the higher the interest rate they would have to offer, and the more they would desire a blue sky law.

Finally, if Macey and Miller's account is true, small banks feared that depositors would withdraw funds to invest in securities markets. I accordingly include as a covariate the rate of increase (decrease) of deposits. The measure I use is a trailing 3-year average of annual percentage changes in the total deposits in a state's banks. A tendency for blue sky laws to follow on the heels of a decline in deposits would provide support for the public choice hypothesis.

Another set of covariates consists of proxies for the populist politics hypothesis. The

populist story is essentially one of farmers versus finance. I accordingly include the fraction of the economically active population engaged in agriculture. The principal argument on which agricultural interests relied in trying to regulate the activities of bankers and securities salesmen was that money deposited in rural banks should be devoted to local lending rather than invested in securities or deposited with urban banks for investment in securities. If so, we should expect that the lower the ratio of loans to deposits, the greater would be farmers' demands for a blue sky law. I accordingly use that ratio as a covariate.

Other covariates are intended to serve as proxies for the strength of the progressive movement. One measure is the percentage of a state's popular vote that went to Roosevelt in 1912. I also use a "progressive index" developed by Fishback and Kantor that measures the number of specified progressive statutes adopted by the relevant state (including, among others, compulsory school attendance, welfare laws, and civil service reform).

Of course, there may be a public choice explanation for any given "progressive" measure, and one might therefore wonder whether it makes sense to view the number of progressive laws adopted as an ideological variable. The justification for considering it such is that these laws were generally supported by a loose but identifiable coalition of reformers. It is possible, but not very plausible, to account for this logrolling in public choice terms. We would have to conclude that, for example, civil service workers and small businesses supported child labor laws at the behest of manual laborers, in return for the manual laborers' promise of support for civil service reform and antitrust legislation. Because binding commitments are unavailable and there is a large incentive for any one group to cheat once its own favored policies were adopted, it is unlikely that these coalitions could have held together were all members operating purely out of self interest. The possibility of repeat play can induce cooperation without binding commitments, but the inherent variability of political winds means that any rational group should discount future political support at a high rate. On the whole, it seems much more plausible to attribute the existence of coalitions to ideology while recognizing that any single piece of legislation might still be best explained in public choice terms. Because none of the laws that make up the progressive index were related to banking or finance, then, that index serves only as an ideological measure for present purposes.

I also include more comprehensive measures of the party composition of the state legislature and executive for each state-year. I define a dummy variable that takes the value 1 if the state had a Democratic governor and 0 otherwise. Two additional variables measure the percentage of Democrats and third-party candidates, respectively, in the state's legislature (combining both upper and lower houses).

Finally, I employ additional conditioning variables that we would expect to influence the likelihood of enacting a blue sky law regardless of the legislature's principal motivations. Two such variables are the percentages of the economically active population employed in manufacturing and mining. It is plausible that these would affect the likelihood of adopting a blue sky law, but it is more difficult to predict the direction of the effect. Mining enterprises in particular were a source of high-risk, high-return securities. Banks might have been particularly interested in suppressing sales of mining enterprises for two reasons. First, the availability of high-risk, high-return securities may have made it easy for investors to construct securities portfolios that clearly dominated bank deposits in risk-adjusted return. Second, if mining enterprises were cut off from the securities markets, banks would have been the other potential source of financing. However, for the same reasons, mining enterprises had a lot to lose from blue sky laws and would have lobbied accordingly. The same is true, although perhaps to a lesser extent, of manufacturing enterprises.

Small business, in general, would have been in a position analogous to that of mining enterprises. I accordingly look at the mix of small, medium-sized, and large manufacturing businesses in each state. I divide up manufacturing businesses into three groups by number of employees: 0 to 100, 100 to 500, and more than 500. Two variables measure the percentage of manufacturing enterprises in each of the latter two categories (the former is the omitted group in the regression).

Two other variables measure the size of the securities industry in a state. We have very little information about investment banks from the pre-SEC era. We can, however, get from the reports of the annual convention of the IBAA the number of investment banking offices in each state for each year in the sample following the IBAA's creation in 1912. I take that number and divide it by the number (in millions) of persons employed for each state-year to create a rough

measure of the relative importance of investment banking. Census data also provide the number of stockbrokers in each state for 1910, 1920 and 1930. I calculate that number as a fraction of the total employed population for those years and interpolate for the intervening years. As was the case for manufacturing and mining, these measures are simultaneously proxies for the lobbying ability of the securities industry and the degree of threat that industry posed to banks.

Finally, unless stated otherwise, I include in all specifications year and regional dummy variables to control for temporal and geographical trends in the adoption of blue sky laws. A list of variables with descriptive statistics appears in Table 2.

C. *Results*

The effects of the covariates on the adoption of a blue sky law are estimated in Table 3. The left-hand column contains coefficients of the logistic regression model, which estimate the effects of the covariates on the log-odds of adoption.[47] The right-hand column provides a more intuitive measure by showing the marginal probabilities–that is, the change in probability of adoption resulting from a one standard deviation increase in the covariate (or, in the case of a dummy variable, a change from 0 to 1), holding all other covariates constant at their sample means.[48] The baseline probability reported in the first line is the probability of adoption when all variables are set at their sample means.

It is first worth noting that the number of securities fraud cases does not appear to explain the adoption of a blue sky law. The estimated coefficient has the wrong sign and is not statistically significant. The table reports the result using the "narrow" fraud variable described above. I also estimated the regression using the "broad" definition of securities fraud cases. The broader definition did not affect the inference on the variable and reduced the pseudo-R^2. Given the limitations of this measure of fraud, we cannot rule out the possibility that an unobservable

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[47] The pseudo-R square reported for the regressions uses the methodology suggested in Daniel McFadden, Conditional logit analysis of qualitative choice behavior, in Frontiers in Econometrics 105, 121 (Paul Zarembka, ed., 1974).

[48] The marginal probabilities are calculated as suggested in Steven B. Caudill & John B. Jackson, Measuring Marginal Effects in Limited Dependent Variable Models, 38 Statistician 203 (1989).

"fraud wave" explains part of the timing of adoption. Nevertheless, the data provide no support for the public interest hypothesis.

Of the public choice and political variables, the one with the largest effect and greatest explanatory power is the progressive laws index. Recall that the index counts the number of progressive laws adopted out of a set of eight. Increasing that number from its sample mean of 5 to 6.7, a one standard deviation increase, increases the probability of adoption of a blue sky law in a given state-year by 8%. This suggests that some of the same political coalitions active in the adoption of progressive legislation also worked for the passage of blue sky laws. The negative and marginally significant coefficient on the dummy variable for Democratic governors is also suggestive, as many staunchly progressive states had Republican governors. Third parties were also often aligned with the progressives, and the estimated coefficient on the variable measuring third party presence in the legislature is positive, although not significant.

By contrast, there is little evidence that populism played an important role in the timing of adoption of blue sky laws. The estimated coefficients on the agriculture variable and the ratio of loans to deposits have the opposite of the expected signs, and neither is significant.

The public choice variables have some explanatory power in the model, although the inference is not as strong, nor as consistent, as it is for the progressive ideology variables. Most notably, a high interest rate on deposits is associated with a greater likelihood of adoption of a blue sky law. Moreover, states in which banks were losing deposits were more likely to adopt a blue sky law, although the effect is only marginally significant. These results are consistent with the notion that banks that faced the most serious threat from securities firms lobbied successfully for enactment of blue sky laws.

Not all of the banking variables, however, are explanatory. The estimated coefficient on the state-chartered bank variable is positive but not significant. In a regression not reported here, I substituted the variable measuring the percentage of total bank assets held by state-chartered banks. The estimated coefficient and significance level were similar to that reported for the other state bank variable. Branch banking has a negative, but not significant, effect on blue sky adoption whether it is measured by actual branches or by a dummy variable indicating a state law permitting branching; the former is reported in the table. Contrary to the prediction of the public

choice hypothesis, states that operated deposit insurance programs were less likely to be early adopters of blue sky laws, although the effect is not significant.

As expected, some of the additional conditioning variables help to predict the timing of blue sky law adoption. The inferences for the industrial organization variables are interesting. States with more large manufacturing firms were less likely to adopt early, while states with more medium-sized firms were more likely to adopt early. It seems plausible that a small number of very large manufacturing firms would have mounted more effective opposition to a blue sky law than a larger number of medium-sized firms.   Finally, a stronger securities industry presence, not surprisingly, tended to delay enactment of a blue sky law. The estimated coefficients on both the investment banking and stockbroker variables are negative. Although they are not individually significant, they are jointly significant at the 5% level (p=0.015) using a likelihood-ratio test (analogous to an F-test in ordinary least squares).

To summarize, the data provide strong support for the progressive ideology hypothesis, some support for the public choice hypothesis, and no support for either the populist or public interest hypotheses. The data also show that states with a few very large manufacturing firms or with a substantial securities industry were less eager to adopt blue sky laws.

D. *Evidence from the type of blue sky law*

As discussed above, different states adopted different types of blue sky laws. The statutes can be readily grouped into three categories. The first is a Kansas-style merit review statute giving the administrator the authority to approve or reject applications and a standard of review so vague as to imply almost limitless discretion. The second also gives the administrator authority to block an offering, but provides somewhat more objective criteria, typically that the offering would be fraudulent. I will refer to these as "ex ante fraud" statutes in recognition of the fact that an offering could not proceed without prior clearance. The most lenient category does not require any pre-clearance of offerings, but provides for ex post penalties in the event of fraud. I will refer to these as "ex post fraud" statutes.

The decision to adopt a particular type of law may be different from the decision to adopt a law or not. Ideologically motivated voters and legislators may be more interested in "making a statement" by adopting a statute regardless of its details. Indeed, more dispersed interests such as

24

farmers and progressives might have paid little attention to the details of the legislation compared to directly affected and concentrated interests such as banks and brokers. A bank wishing to suppress competition would favor of a statute that gave the administering official (often a bank commissioner, who might be sympathetic to the banks' point of view) maximum authority to prevent securities offerings. Thus, a reasonable hypothesis is that the public choice variables would be relatively more and the political variables relatively less influential in explaining the type of blue sky law adopted in comparison to the timing of adoption.

I therefore add a second step to the analysis and examine the choice among the three basic types of blue sky law. I employ an ordered logit model to estimate the effects of my covariates on the strictness of the state's law–with ex post fraud ranked as least strict and merit review as more strict–given that the state has adopted a blue sky law. As a robustness check, I also use a multinomial logit model that treats the three types of statute as separate categories without ordinally ranking them. In order to have sufficient degrees of freedom for the latter model, I omit some variables that do not significantly improve the model's log-likelihood.

The results of the ordered logit regression are reported in Table 5. Compared to Table 4, there is a shift in the importance of the public choice and political variables. The estimated coefficients on the progressive index and political composition variables are in each case insignificant. The percentage of banks that are state chartered, by contrast, has a positive and highly significant estimated coefficient. The rate of interest on savings deposits and the rate of change of deposits continue to have a positive and negative impact, respectively, and each is marginally significant. The agricultural employment variable is also associated with a more stringent blue sky law, as are mining and manufacturing employment.

The multinomial logit regression, not reported here, is broadly consistent, but with two differences. First and most important, the stockbroker variable is associated with a large and highly significant reduction in the probability of adopting a merit review statute, but has no impact on the choice between ex ante and ex post fraud statutes. It appears, therefore, that stockbrokers may have devoted their lobbying efforts to defeating merit review but did not expend political capital on defeating ex ante fraud statutes. The second difference is that the agricultural employment variable loses significance. The state-chartered bank variable is again a

strong predictor of a more stringent blue sky law.

The results are consistent with Macey and Miller's qualitative discussion. It appears that small banks lobbied in favor of stricter statutes, while stockbrokers strongly opposed merit review. Progressive political coalitions seem to have had little impact on the type of statute even though they influenced the rapidity with which a state adopted a blue sky law.

E. *Evidence of Changes in Bank Profitability*

A related inquiry is whether the enactment of a blue sky law was, in fact, beneficial to banks. The most relevant available data are from the Comptroller of the Currency annual reports. These provide information on the rate of return (profits divided by capital and surplus) for national banks grouped by state. While we do not have comprehensive income data for state-chartered banks, the Comptroller's data are fortunately presented separately for city and country banks. I use the latter as a rough proxy for the profitability of small banks in a state. To be sure, the data do not cover the smallest banks (which would have been state-chartered), but being able to limit the analysis to national banks outside the main cities is the next best alternative.

I measure profitability of each state's country banks for the five years prior to enactment of a blue sky law and the five years after enactment. I omit Connecticut (adopted in 1929) and Delaware (adopted in 1931) to avoid confounding effects from the Depression. This leaves 460 observations, enough to permit a full fixed-effects regression with dummy variables for each state and each year. Including a dummy variable that switches from 0 to 1 after enactment of a blue sky law allows me to estimate the effect of a blue sky law on profitability, controlling for the state and year. The average annual rate of return in the sample is 8.9% with a standard deviation of 4.0%; the range is from -6.5% to 29.1%.

Table 5 shows the results of the fixed-effects model. Considering all blue sky laws as a single group, it appears that the adoption of a statute had no effect on bank profits. The estimated coefficient is positive, but it is not statistically significant. When we break the sample down into three sub-samples, one for each of the three types of blue sky law, however, a different picture emerges. Neither an ex post fraud law nor a more stringent ex ante fraud law has a significant effect, although the estimated coefficient increases as we move from the first to the second. A full merit review statute, however, has a very large and highly significant effect on the

26

rate of return. If small banks attempted to influence the type of statute that was enacted more than whether a statute was enacted, these results suggest that their behavior was rational. The result also fits well with the fact that the Kansas bank commissioner was able to use a merit review statute to reject the vast majority of proposed bond offerings in Kansas.

I also examine the effect of blue sky laws on the interest rates paid by country banks on savings accounts. If banks correctly believed that a blue sky law would reduce competition for depositors' funds, then the rate of interest paid on deposits should be relatively lower in states with more stringent blue sky laws. Unfortunately, data restrictions make it impossible to carry out a test similar to the above analysis of bank profits. In addition to the National Monetary Commission's survey of savings deposit interest in 1909, the Comptroller of the Currency published comprehensive data on deposit interest rates in 1923 and 1924. The latter date is after all but two blue sky laws had been adopted, and 1909 is two years prior to the first adoption. I accordingly measure, for each state in which a blue sky law adopted prior to 1924, the difference between the interest rate paid in 1924 and that paid in 1909, limiting myself again to country banks. Interest rates rose generally during this period. However, as shown in Table 6, they rose least in states with a merit review statute and most in states with an ex post fraud statute. The test is, however, not very powerful, and using a single factor ANOVA test, the differences are not statistically significant. Moreover, the result could in part be a consequence of mean reversion. The prior analysis showed that states with relatively high interest rates on savings were more likely to adopt a blue sky law early, and early adopters were also more likely to adopt merit review. However, with those caveats, the interest rate evidence is consistent with the evidence from small bank profitability.

VII. *Conclusion*

Analyses of the timing of blue sky laws, the types of laws adopted, and their effects on bank profitability suggest an intriguing and coherent story about the political and economic forces behind their adoption. It appears that broad-based political movements had the greatest impact on the basic decision to adopt a blue sky law, although lobbying by small-town banks also appears to have been a factor.

Small banks, however, appear to have had the strongest impact on the type of statute

ultimately adopted. The greater the prevalence of state-chartered banks, the more likely it is that a state would adopt a more stringent form of blue sky law (merit review or an ex ante fraud statute), all other things equal. Similarly, the greater the presence of stockbrokers, the less likely it is that a state would adopt merit review. Banks appear to have correctly predicted the impact of giving blue sky commissioners (who often were bank regulators) extensive discretion to stop securities offerings. In the five years following adoption of a merit review statute, bank profits increased on average by nearly 5 percentage points, controlling for state and year.

The data suggest that public choice analysis, although useful, does not tell the entire story behind the growth of economic regulation in early twentieth century America. Ideologically-motivated political coalitions appear to have played a role as well.

Table 1

Dates of Adoption of Blue Sky Laws

Year	States adopting
1911	Kansas
1912	Arizona, Louisiana, Vermont
1913	Arkansas, California, Florida, Georgia, Idaho, Iowa, Maine, Michigan, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oregon, South Dakota, Tennessee, Texas, West Virginia, Wisconsin
1915	South Carolina
1916	Mississippi, Virginia
1917	Minnesota, New Hampshire
1919	Alabama, Illinois, Oklahoma, Utah, Wyoming
1920	Indiana, Kentucky, Maryland, New Jersey
1921	Massachusetts, New Mexico, New York, Rhode Island
1923	Colorado, Pennsylvania, Washington
1929	Connecticut
1931	Delaware

Source: state session laws

Table 2
Descriptive statistics

Variable	Minimum	Maximum	Mean	Std. Dev.
Number of securities fraud cases, 1901-1910	0	21	2.1	5.2
State-chartered banks as % of total	13.6	47.6	36.2	8.7
Assets in state-chartered banks as % of total	10.5	78.3	43.7	14.2
Branch banking allowed (0=no, 1=yes)	0	1	0.36	0.48
Percent of banks operating branches	0	14.1	2.6	3.4
Deposit insurance (0=no, 1=yes)	0	1	0.1	0.3
Interest rate on savings deposits, 1909 (%)	2.9	5.0	3.6	0.4
Rate of change of deposits (3-yr ave.) (%)	-8.6	32.3	7.7	5.7
Agricultural employment (% of total)	3.0	77.2	28.2	19.8
Ratio of loans to deposits	0.1	1.4	0.7	0.2
Roosevelt's share of popular vote in 1912 (%)	0	50.6	24.0	9.4
Progressive laws index	0	8	5.1	1.7
Democratic governor (0=no, 1=yes)	0	1	0.5	0.5
Democrats as % of legislature	0	100	46.4	27.7
Other parties as % of legislature	0	28.3	2.2	4.2
Manufacturing employment (% of total)	7.5	58.9	30.1	14.5
Mining employment (% of total)	0	21.0	3.0	4.3
Workers in firms with 100-499 employees (%)	0.35	12.12	4.54	2.45
Workers in firms with > 500 employees (%)	0	3.39	0.9	0.7
IBAA member offices per million employed	0	64.0	10.6	14.5
Stockbrokers as % of employed	0.2	2.3	0.6	0.5

Sources: See Appendix A

Table 3
Effect of Explanatory Variables on the Adoption of a Blue Sky Law

Variable	Coefficient	Standard error	p-value	Marginal probability
Baseline probability				.021
Number of securities fraud cases	-0.097	0.110	.377	-.008
State-chartered banks as % of total	0.113	0.130	.385	.031
Percent of banks operating branches	-0.079	0.111	.476	-.005
Deposit insurance	-1.021	1.041	.327	-.006
Interest rate on savings deposits, 1909	3.613	1.540	.019	.067
Rate of change of deposits	-0.130	0.078	.098	-.011
Agricultural employment	-0.073	0.079	.359	-.016
Ratio of loans to deposits	1.096	2.607	.674	.005
Roosevelt's share of popular vote in 1912	0.049	0.054	.362	.010
Democratic governor	-1.520	0.885	.086	-.016
Progressive laws index	1.694	0.429	.000	.079
Democrat share of legislature	-0.008	0.069	.910	-.001
Other parties' share of legislature	0.022	0.024	.354	.015
Mining employment	0.164	0.145	.258	.018
Manufacturing employment	-0.194	0.160	.225	-.020
Workers in firms with 100-499 employees	1.249	0.482	.010	.286
Workers in firms with > 500 employees	-5.474	1.799	.002	-.020
IBAA member offices	-0.029	0.030	.328	-.008
Stockbrokers as % of employed	-1.619	1.299	.213	-.012
Log likelihood: -51.7	McFadden pseudo-R^2: .56			

The table does not report estimated coefficients for year and region dummy variables that are also included as covariates.

Table 4
Effects of Explanatory Variables on the Type of Blue Sky Law Adopted

Variable	Coefficient	standard error	p-value
Number of securities fraud cases	0.142	0.178	.423
State-chartered banks as % of total	0.309	0.115	.007
Percent of banks operating branches	-0.004	0.201	.986
Deposit insurance	0.892	1.312	.497
Interest rate on savings deposits, 1909	2.864	1.509	.058
Rate of change of deposits	-0.133	0.076	.080
Agricultural employment	0.262	0.128	.041
Ratio of loans to deposits	0.801	3.542	.821
Roosevelt's share of popular vote in 1912	0.043	0.061	.483
Democratic governor	-1.861	1.679	.268
Progressive laws index	0.252	0.389	.518
Democrat share of legislature	0.112	0.185	.546
Other parties' share of legislature	0.029	0.031	.342
Mining employment	0.741	0.265	.005
Manufacturing employment	0.517	0.260	.046
Workers in firms with 100-499 employees	-0.906	0.569	.111
Workers in firms with > 500 employees	0.293	2.055	.887
IBAA member offices	0.037	0.056	.509
Stockbrokers as % of total employed	-0.384	1.834	.834
Log-likelihood: -26.0	McFadden pseudo-R^2: 0.44		

Table 5
Blue Sky Laws and Country Bank Profits

Type of statute	Coefficient	Standard error	p-value	Adjusted R-squared
All	0.334	0.853	.695	.487
Ex post fraud	-0.205	0.781	.794	.939
Ex ante fraud	0.255	1.033	.828	.471
Merit review	4.987	1.877	.009	.765

The estimated coefficient is in each case on a dummy variable that equals one when a blue sky law is in effect.

Table 6

Blue Sky Laws and Interest Rates on Country Bank Savings Accounts

	Type of statute			
	Ex post fraud	Ex ante fraud	Merit review	p value
Increase in interest rates on savings deposits in country banks, 1909-1924 (%)	9.32	5.45	4.58	.328

Appendix A

Data sources

All variables are taken from the data set for Fishback and Kantor, supra note 45, downloaded from Price Fishback's web site, http://www.arizona.edu/~econ/fishback.html, in December 2000, except for the following:

Variable	Source
Number of securities fraud cases	LEXIS/NEXIS state securities law database
State-chartered banks as % of total	Board of Governors of the Federal Reserve System, *All-Bank Statistics, United States 1896-1955* (1959).
Branching and deposit insurance statutes	Samuel L. Welldon, *Digest of State Banking Laws*, in Report of National Monetary Commission, Senate Doc. No. 353, 61st Cong., 2d sess. (1910); state session laws
Percent of banks operating branches	Board of Governors of the Federal Reserve System, *Banking and Monetary Statistics* (1943).
Interest rate on savings deposits, 1909 and 1924	U.S. Department of Treasury, Office of the Comptroller of the Currency, *Annual Report* 1909, 1924
Rate of change of deposits	*All-Bank Statistics*
Ratio of loans to deposits	*All-Bank Statistics*
Investment banks per million employed	Number of investment bank offices from Investment Bankers Association of America, *Proceedings of the Annual Convention*, various years. Total employment from Fishback and Kantor data.
Stockbrokers as % of employed	Number of stockbrokers from census data for 1910, 1920 and 1930, interpolated for other years. Total employment from Fishback and Kantor data.