

FDIC Use of Market Data

**Market Indicators Workshop:
Federal Reserve Bank of Cleveland
March 26, 2004**

Steve Burton, Senior Financial Analyst, Division of Insurance and Research

The Role of Market Indicators

...any good examiner recognizes that data should come from a variety of different sources, including the signals that come from the market. Therefore, market discipline can be an important adjunct to the supervisory process.

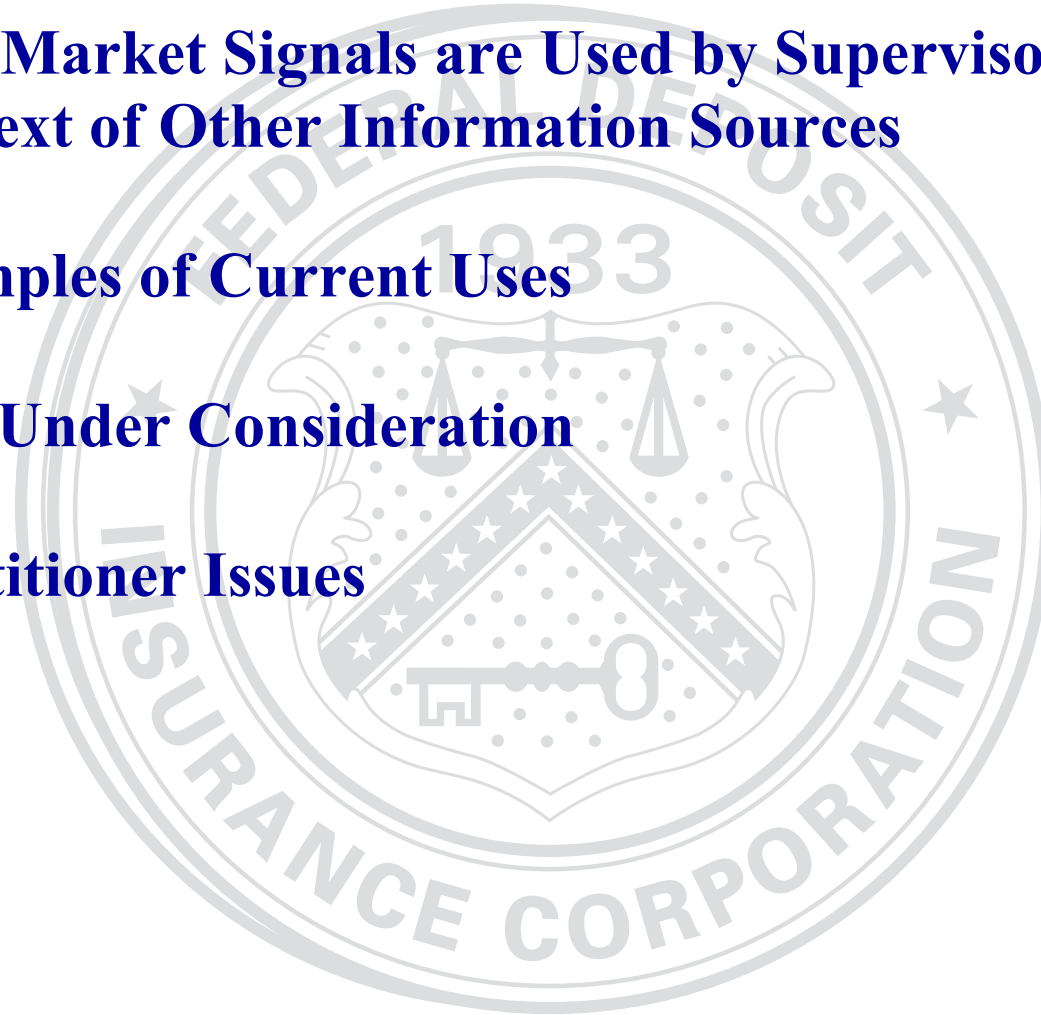
Roger W. Ferguson Jr., Vice Chairman of the Board of Governors of the Federal Reserve System

I propose that a formal integration of selected market data into the regulatory agencies' analytical systems could substantially improve the quality of the oversight they can provide.

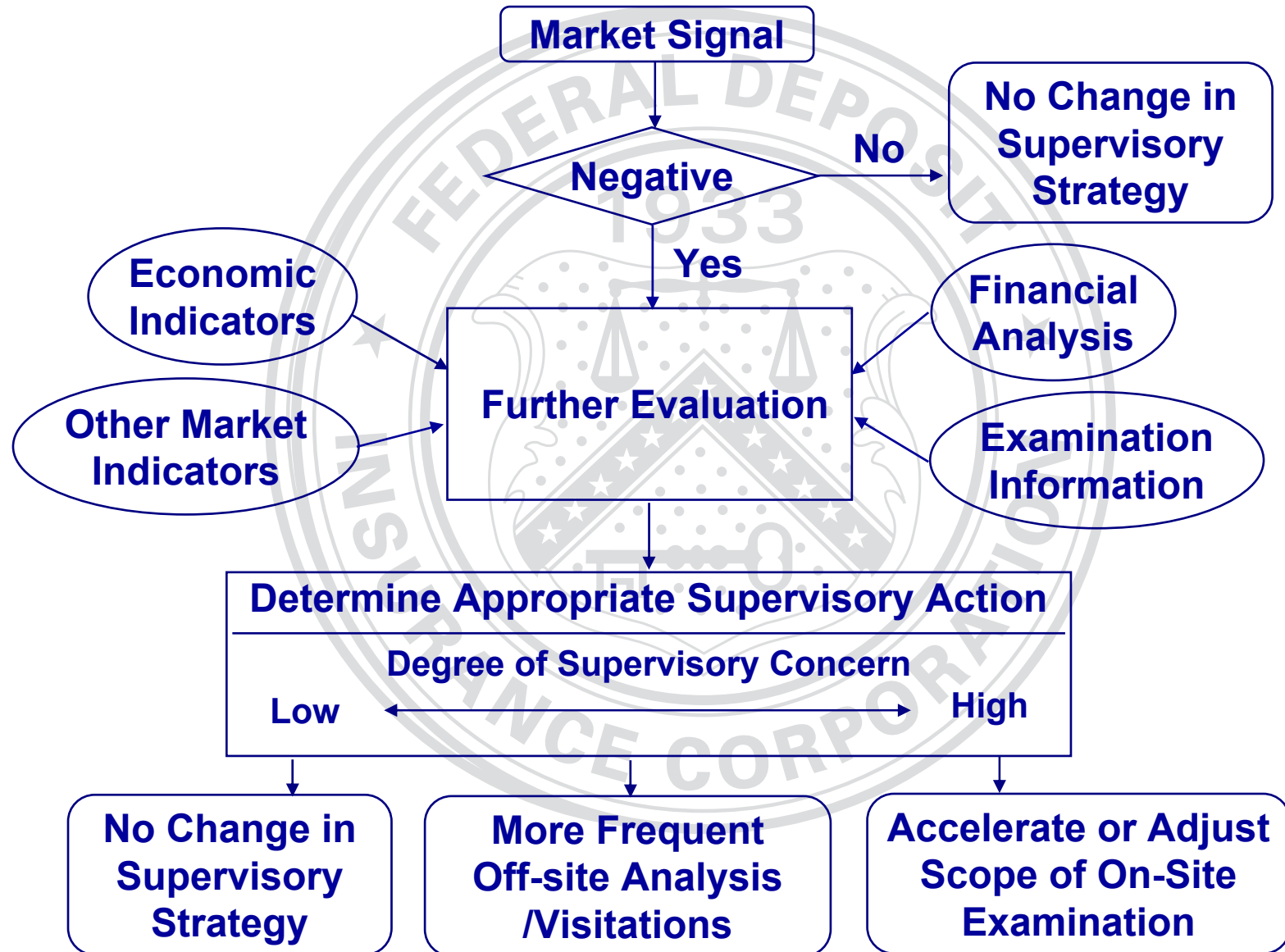
Mark J. Flannery, Barnett Banks Professor of Finance at the University of Florida

Discussion Agenda

- I. **How Market Signals are Used by Supervisors in the Context of Other Information Sources**
- II. **Examples of Current Uses**
- III. **Uses Under Consideration**
- IV. **Practitioner Issues**



Stylized View of How Market Signals Might Influence Supervisory Processes



Putting Market Information in Context

Availability of Supervisory Information:

Depth and Frequency of Collection Determined by Supervisory Program

	Large Bank Programs	Mid-Size Bank Programs	Community Bank Programs
Market Data Available	159 institutions \$5,243 billion in assets	85 institutions \$1,557 billion in assets	1,329 institutions \$848 billion in assets
Market Data Not Available	0 institutions	23 institutions \$183 billion in assets	7,599 institutions \$1,256 billion in assets

Characteristics of Supervisory Programs:

- **Large Bank – Continuous contact with bank; dedicated staff**
- **Mid-Size Bank – Tailored supervision; frequent bank contact**
- **Community Bank – Traditional point-in-time examinations (>\$250 million examined at least once per year)**

Putting Market Information in Context

Availability of Financial Performance Information:

	Number of Filers	Insured Inst. Assets of Filers	Percent of Total Insured Assets
Call Reports	9,195	\$9,087 billion	100%
FR Y-9C Reports*	2,198	\$7,361 billion	81%
SEC Reports	1,001	\$7,650 billion	84%

*Only top tier holding companies are included. Figures are an approximation based on the \$150 million reporting threshold.

Putting Market Information in Context

Availability of Market Information:

Equity Information

Publicly Traded U.S. Banking and Thrift Companies

<u>Exchange</u>	<u>Number of Companies</u>	<u>Assets (\$ Billions)</u>
New York Stock Exchange (NYSE)	105	\$6,221
NASDAQ	818	\$1,238
Other Over the Counter (OTC)	33	\$153
American Stock Exchange (AMEX)	45	\$35
<u>Total</u>	<u>1,001</u>	<u>\$7,648</u>

Source: Interactive Data Corporation

Debt Information

- Debt Ratings – 133 companies covering \$6,415 billion in insured assets
- Sub debt pricing – 51 companies covering \$5,355 billion in insured assets

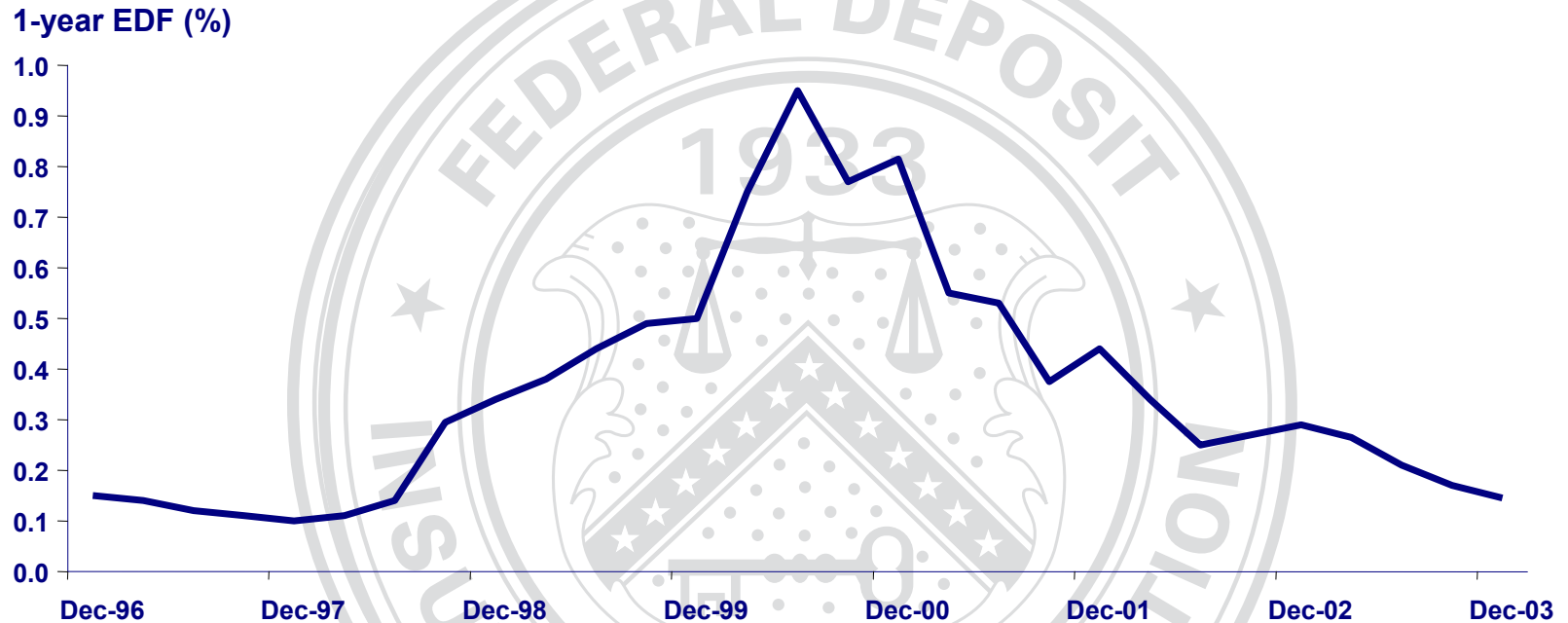
Other Market-Related Information

- EDFs – 673 companies covering \$7,101 billion in insured assets
- Analyst Opinions – 25 to 50 largest banking companies

Examples of Current Supervisory Applications

General Industry Risk Monitoring:

Median Expected Default Frequency Trends of U.S. Commercial Banks



Distribution of EDFs for U.S. Commercial Banks from 1998 to 2003

	Dec'98	Dec'99	Dec'00	Dec'01	Dec'02	Dec'03
<=.20 (A to AAA)	32%	19%	7%	19%	32%	66%
>.20 and <=.48 (BBB)	30%	29%	22%	34%	41%	22%
>.48 and <=1.49(BB)	30%	35%	46%	36%	20%	7%
>1.49 and <=5.51 (B)	6%	14%	22%	8%	5%	3%
>5.51 (worse than B)	2%	2%	2%	2%	2%	1%

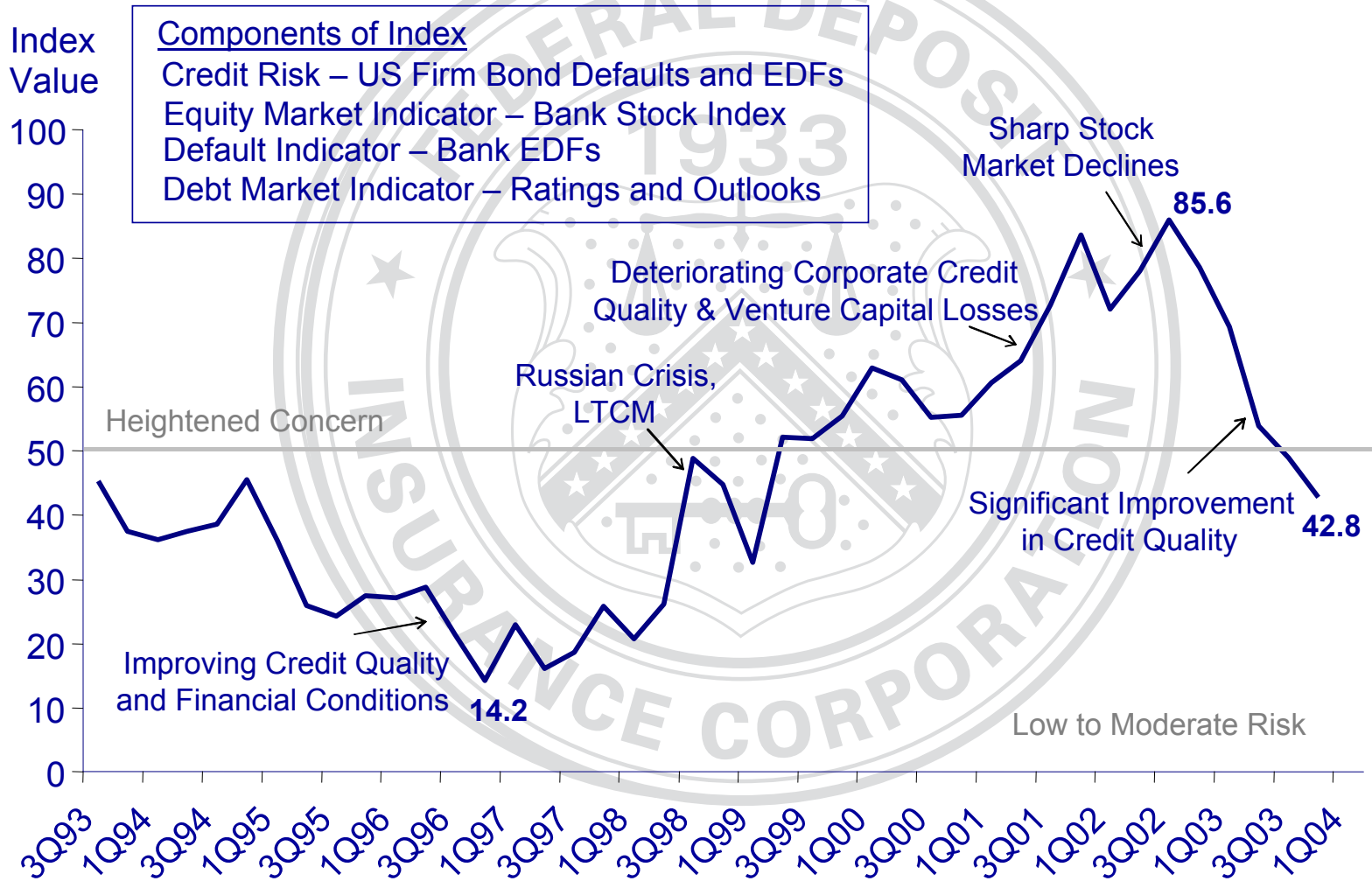
* (Approximate S&P Rating Equivalent)

Source: Moody' KMV

Examples of Current Supervisory Applications

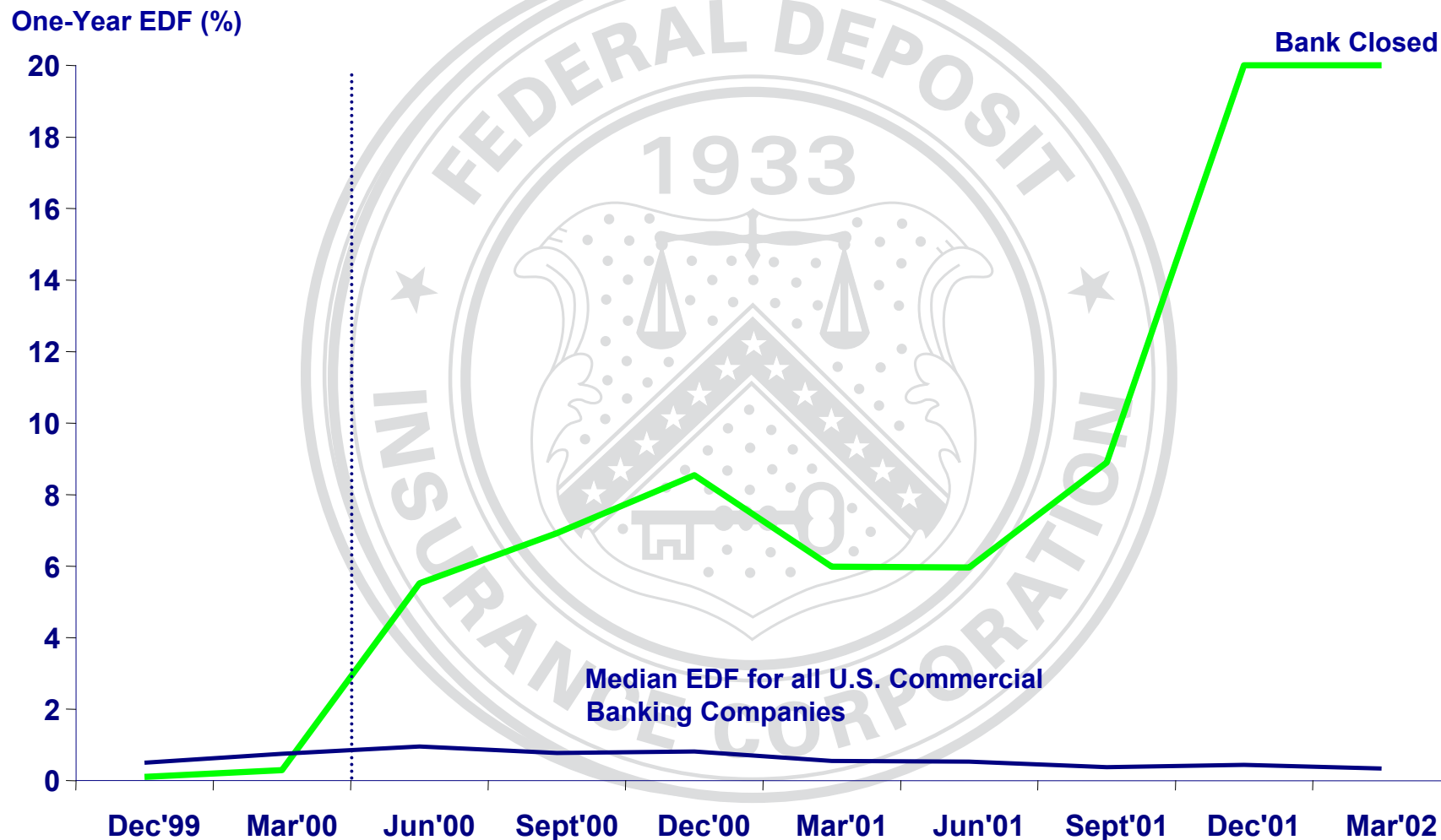
General Industry Risk Monitoring:

Summary Risk Index for Large Insured Depository Institutions



Examples of Current Supervisory Applications

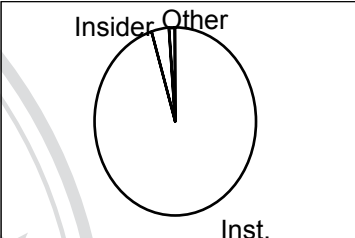
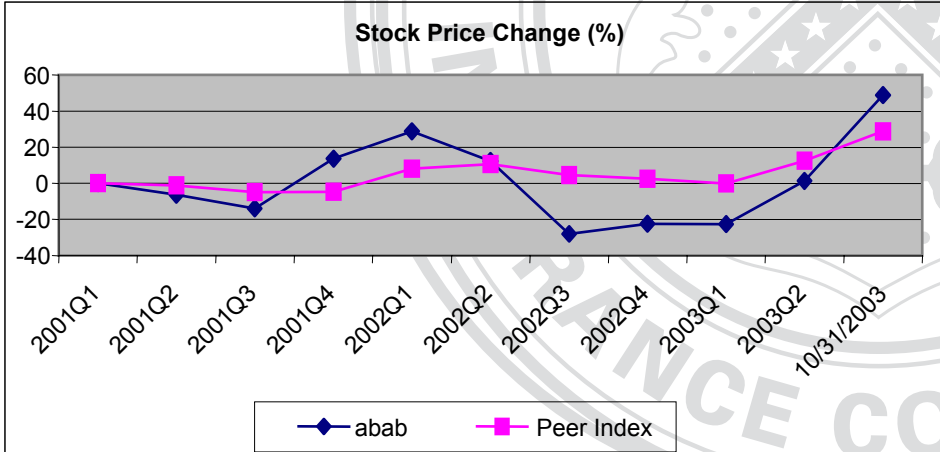
Outlier Identification:



Source: Moody's KMV

Examples of Current Supervisory Applications

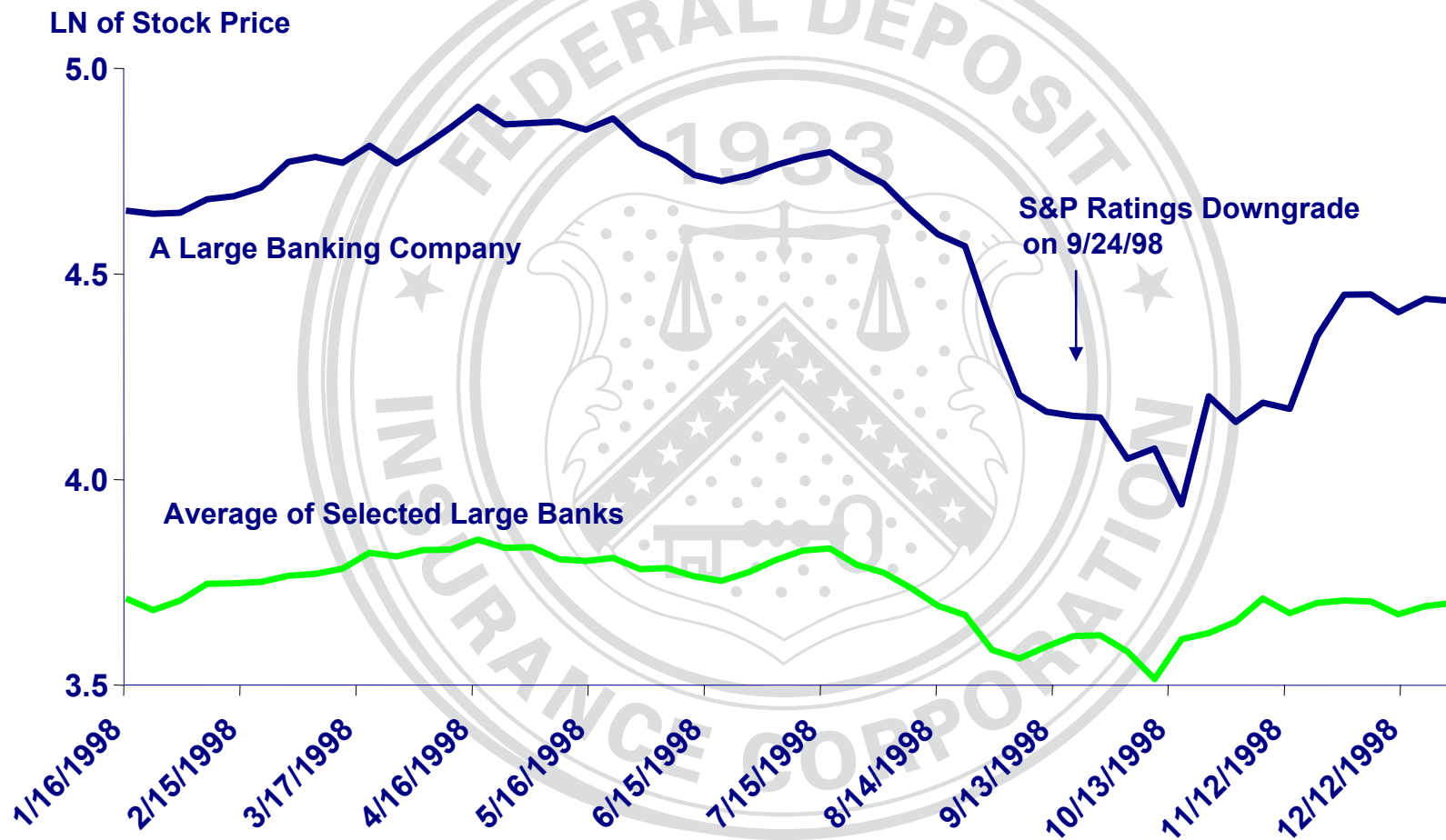
Off-site Monitoring Between Examinations:

Anytown Bancshares		Price: 34.97	Anytown, CA
ABAB		Market Value (\$M): 1,500.8	Assets (\$M) of 7,000
3003 Tasman Drive Santa Clara, CA, 95054-1191 (408) 654-7400 http://www.svb.com Offices 8 ATMs 3		Officers CEO: Ken Doe CFO: Mark Smith Moodys 6/17/02 Baa1 S & P NA Fitch NA	Ownership Institutional 95.02 6/30/2003 Insider 4.98 2/18/2003 
Market Data			
		1 Month Total Return (%): 26.70 1 Year Total Return (%): 86.11 sivb price & exchange: 34.97 sivb 3-year high & low: 49.00	Peer Index 10.33 21.57 NASDAQ 14.00
		Price/EPS(x) 34.62 Pr/Core(x) 28.90	Pr/Book(%) 265.73 Price/TB(%) 325.61
EPS and Core EPS are for the last-12-months. Pricing data is as of 10/31/03			
Peer Index is comprised of all NYSE, AMSE and NASDAQ Banks headquartered in the West.			

Examples of Current Supervisory Applications

Influencing the Supervisory Outlook:

Supervisory Outlook Turns Negative in 1998

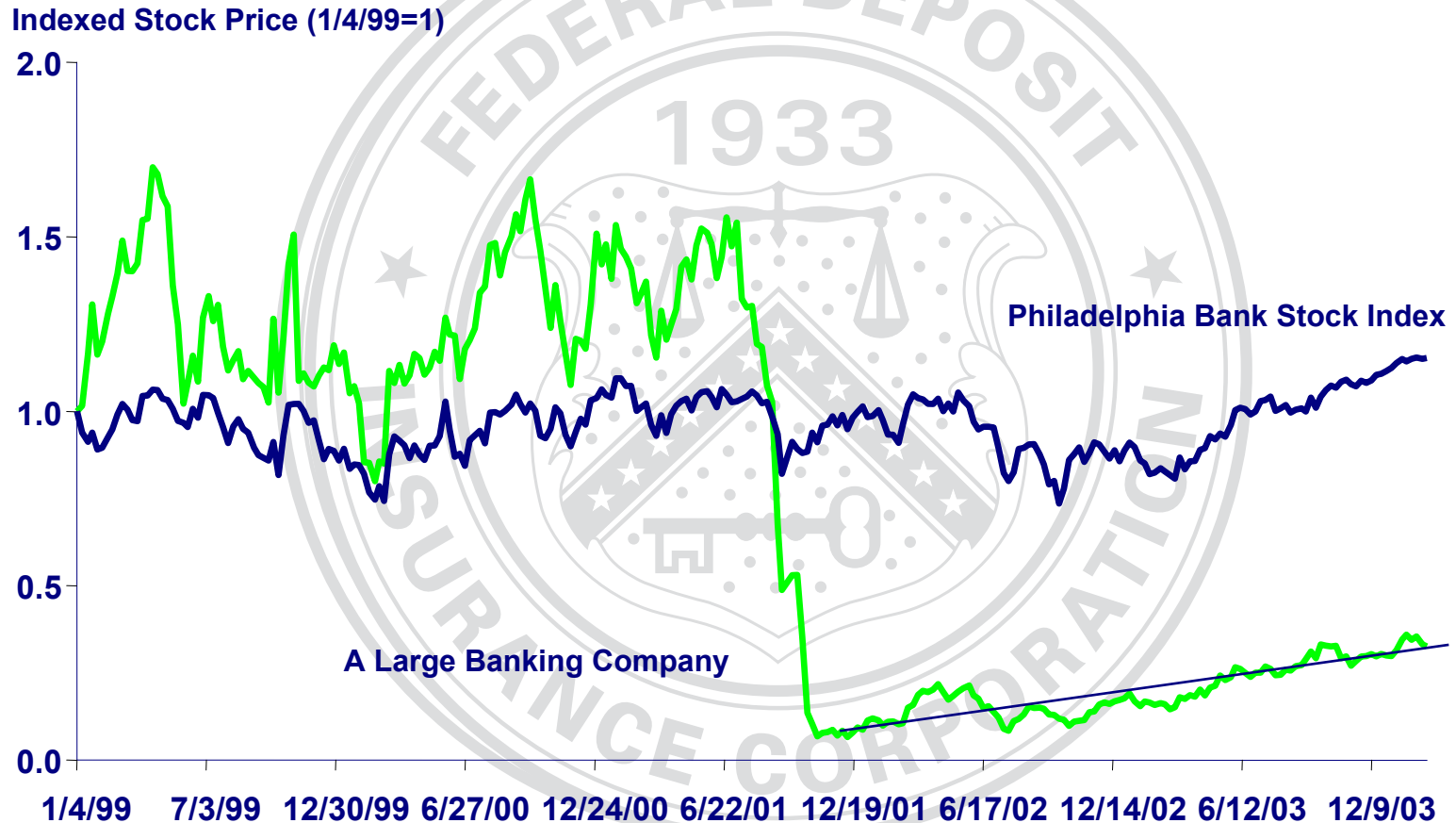


Sources: Interactive Data Corp., S&P

Examples of Current Supervisory Applications

Influencing the Supervisory Outlook (the Flip Side):

Market Price Gradually Improves for Previously Out-of-Favor Company



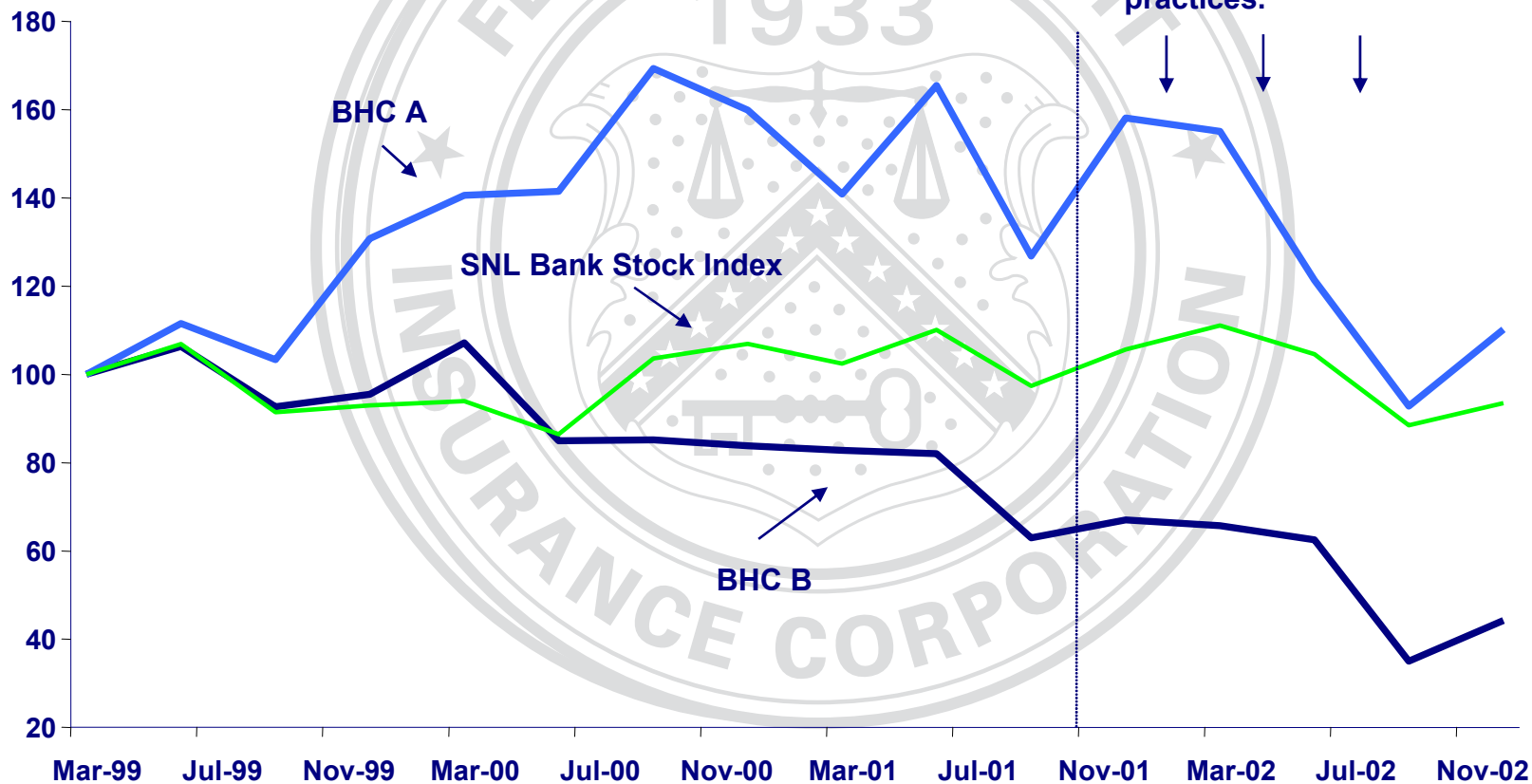
Source: Yahoo Finance

Examples of Current Supervisory Applications

Confirmation or Validation of Risks:

Market's Reacted Negatively to U.S. Money Center Bank Disclosures in 2002

Indexed EOP Stock Price
(Mar '99 = 100)



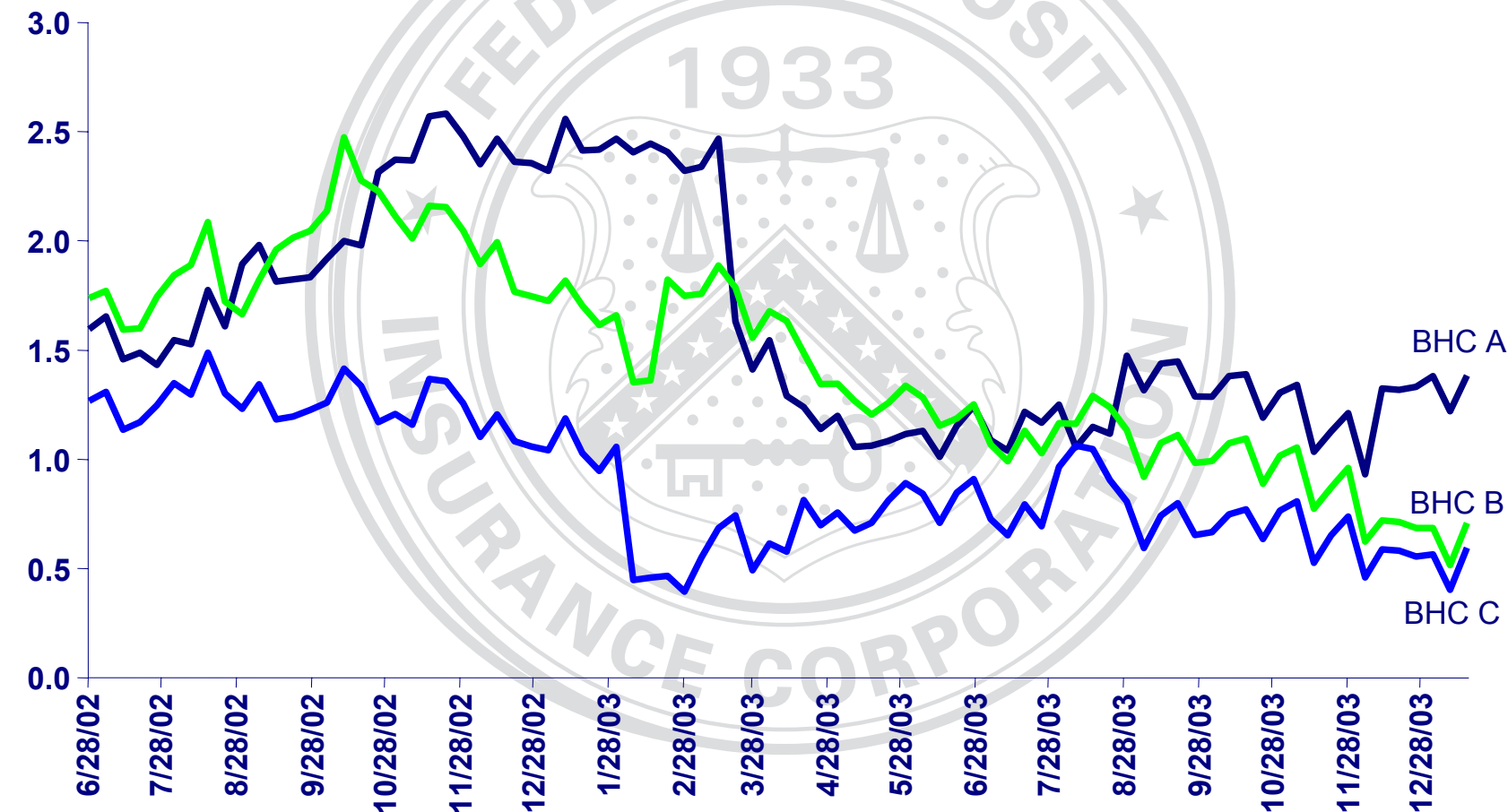
Source: SNL Datasource

Examples of Current Supervisory Applications

Validation of Risk Rankings:

Subordinated Debt Spreads of Selected Companies

Spread to Treasury (%)

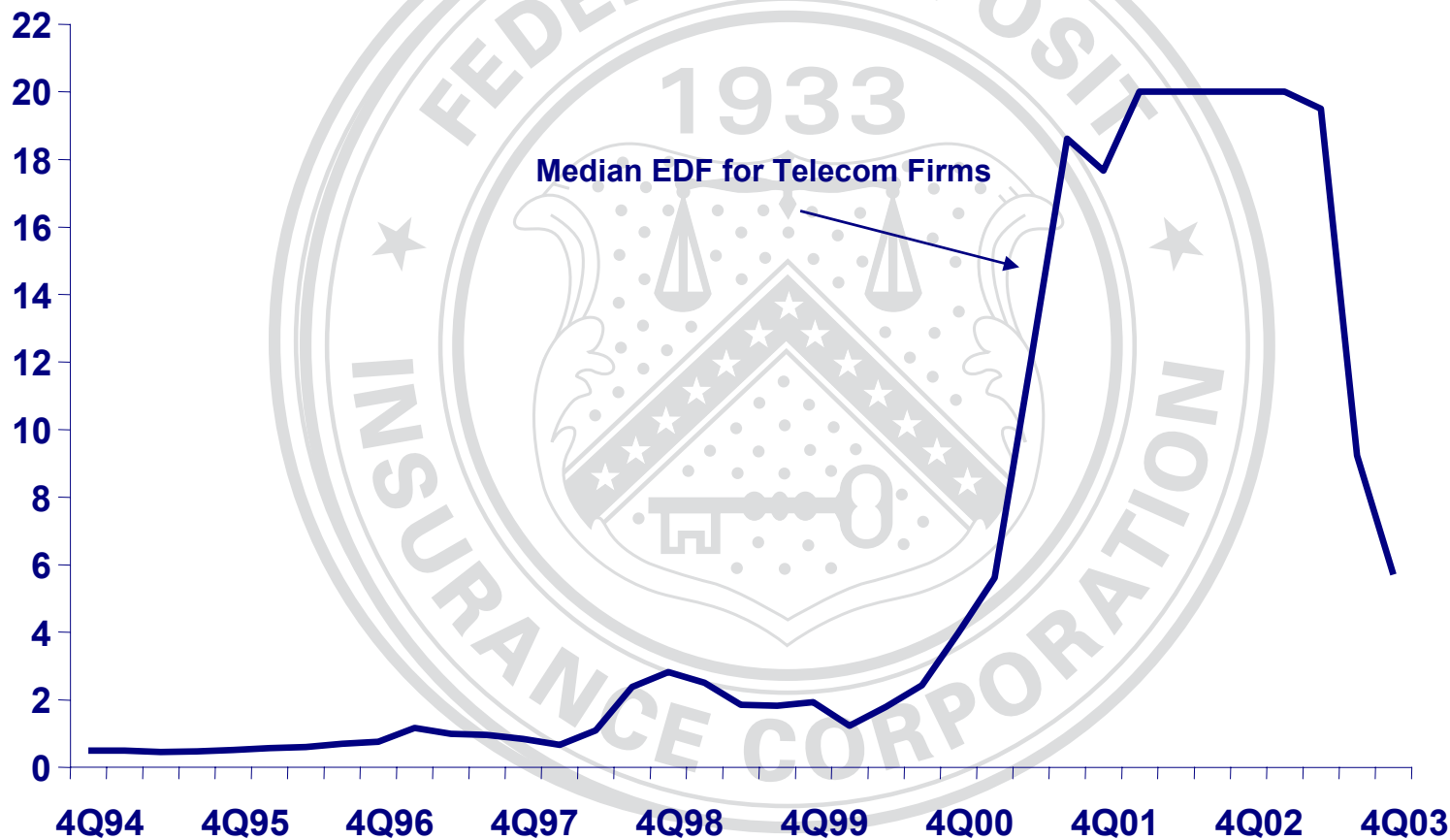


Source: Interactive Data Corporation

Examples of Current Supervisory Applications

Evaluating Customer Credit Risk Trends:

One-Year EDF % (Line)



Source: Moody's KMV

Potential Uses of Market Indicators

As a deposit insurer, the FDIC has unique functions that could rely more heavily on market indicators:

- **Differentiating risks among larger banks for deposit insurance pricing purposes.**
- **Establishing more reliable estimates for losses in the event of bank or thrift failures (a key input into the determination of contingent loss reserves).**
- **Enhance the explanatory power of internal failure models for large banks.**

Setting Up the Problem

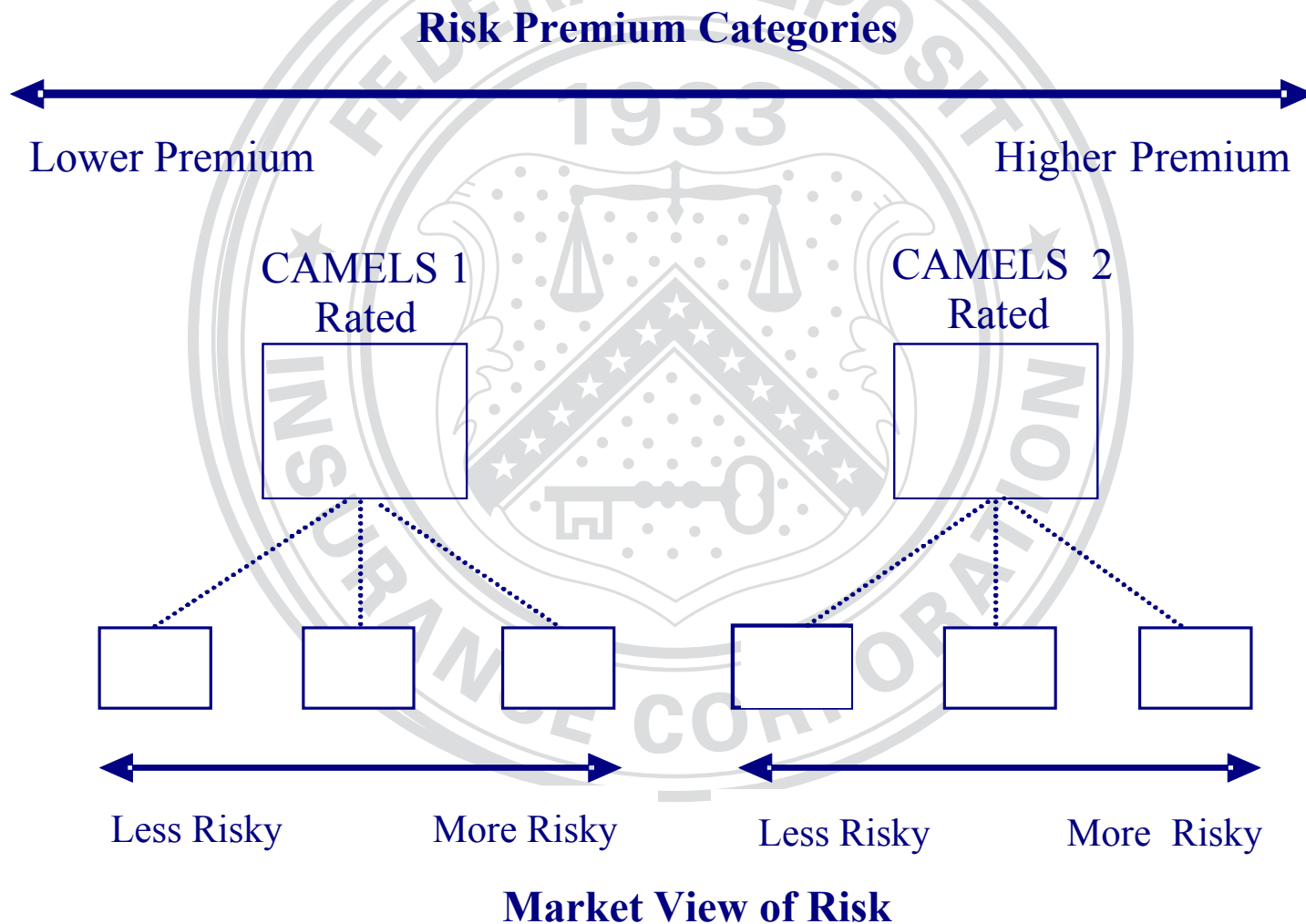
The current deposit insurance pricing matrix (implemented by FDICIA) does not adequately differentiate risk.

Current Nine-Cell Pricing Matrix for Deposit Insurance

Capital Subgroup	Supervisory Risk Subgroup		
	A	B	C
1. Well Capitalized	Rate: 0 bp No. Banks: 8,456 % of Banks: 92.1%	Rate: 3 bp No. Banks: 535 % of Banks: 5.8%	Rate: 17 bp No. Banks: 94 % of Banks: 1.0%
2. Adequately Capitalized	Rate: 3 bp No. Banks: 67 % of Banks: .7%	Rate: 10 bp No. Banks: 11 % of Banks: 0.1%	Rate: 24 bp No. Banks: 10 % of Banks: 0.1%
3. Undercapitalized	Rate: 10 bp No. Banks: 3 % of Banks: 0.0%	Rate: 24 bp No. Banks: 0 % of Banks: 0.0%	Rate: 27 bp No. Banks: 6 % of Banks: 0.1%

One Possible Solution

Use market information to further differentiate risk categories based on supervisory ratings alone

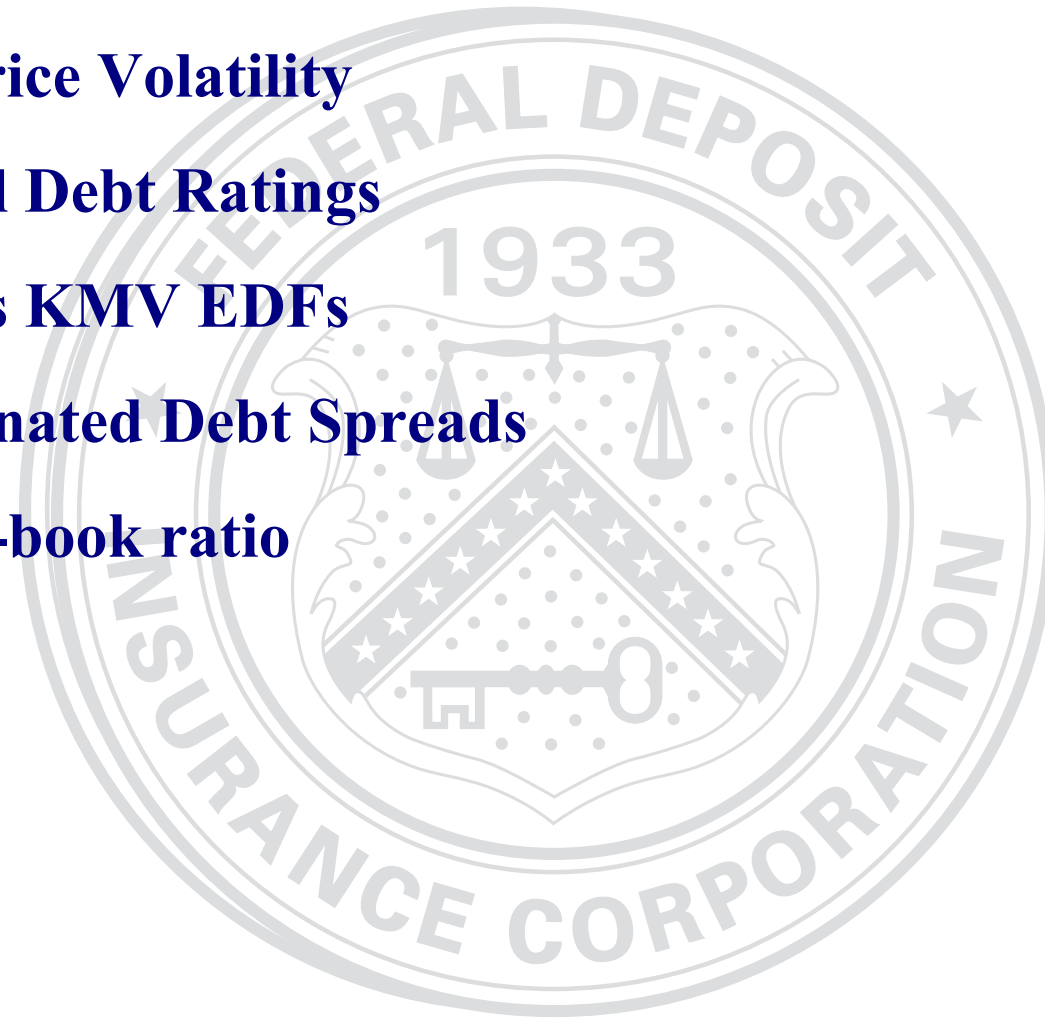


Why is it Necessary to Consider Market Data for Large Banks?

- **Market information allows for a greater degree of risk differentiation than supervisory rating systems alone.**
- **Pricing based on failure models that use accounting data are weighted heavily toward the experience of small institutions.**
- **Result is a model that penalizes large banks for high non-core funding and low capital ratios.**

Market Indicators Under Consideration

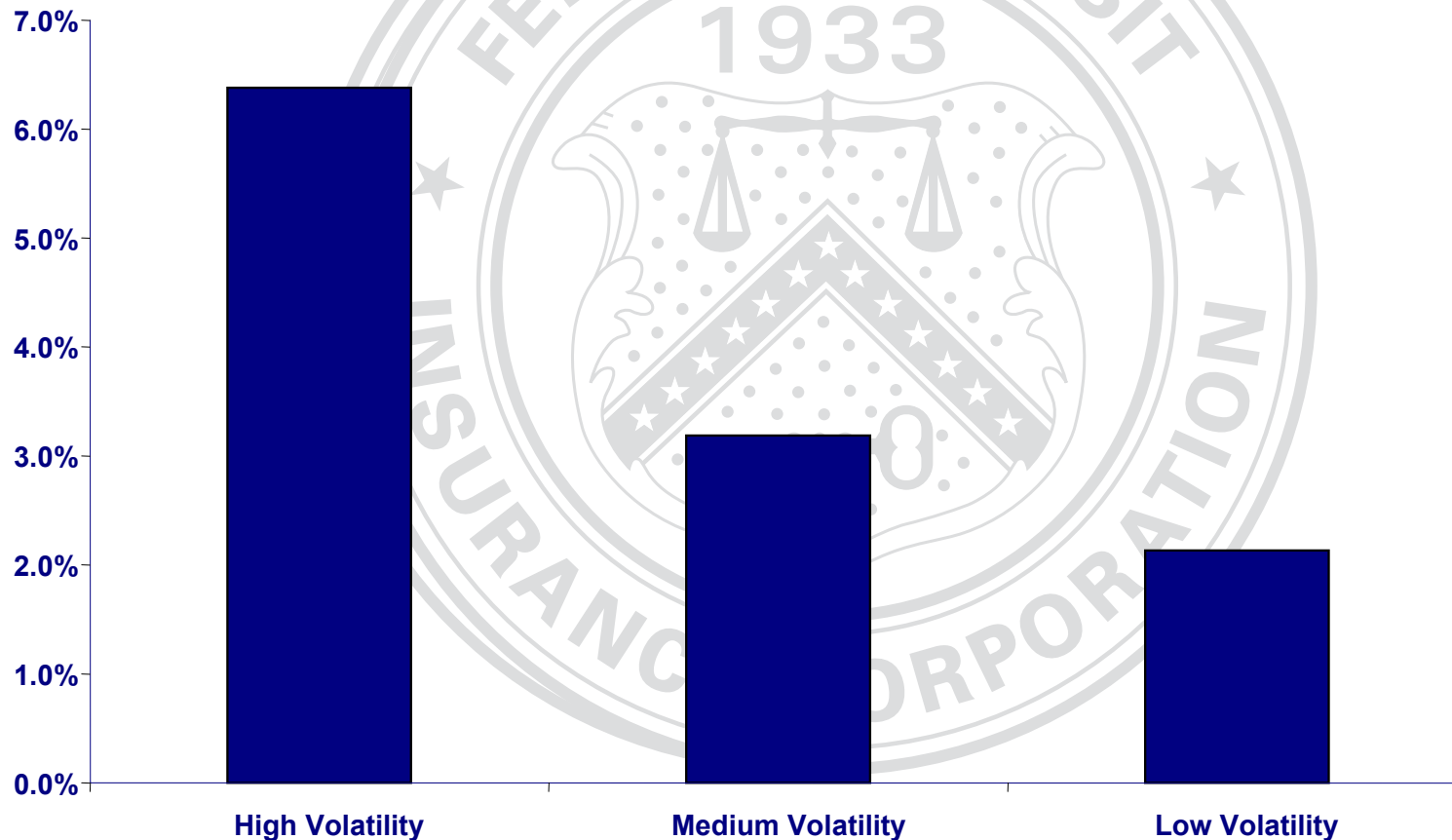
- **Stock Price Volatility**
- **External Debt Ratings**
- **Moody's KMV EDFs**
- **Subordinated Debt Spreads**
- **Price-to-book ratio**



Market Indicators Appear to Differentiate Risk Among Larger Institutions

Stock Price Volatility:

Percentage of Top 25 Institutions (Lead Bank) Downgraded to CAMELS '3' or Worse within 2 years of Volatility Calculation (Coeff. of Variation, 1987-1999)

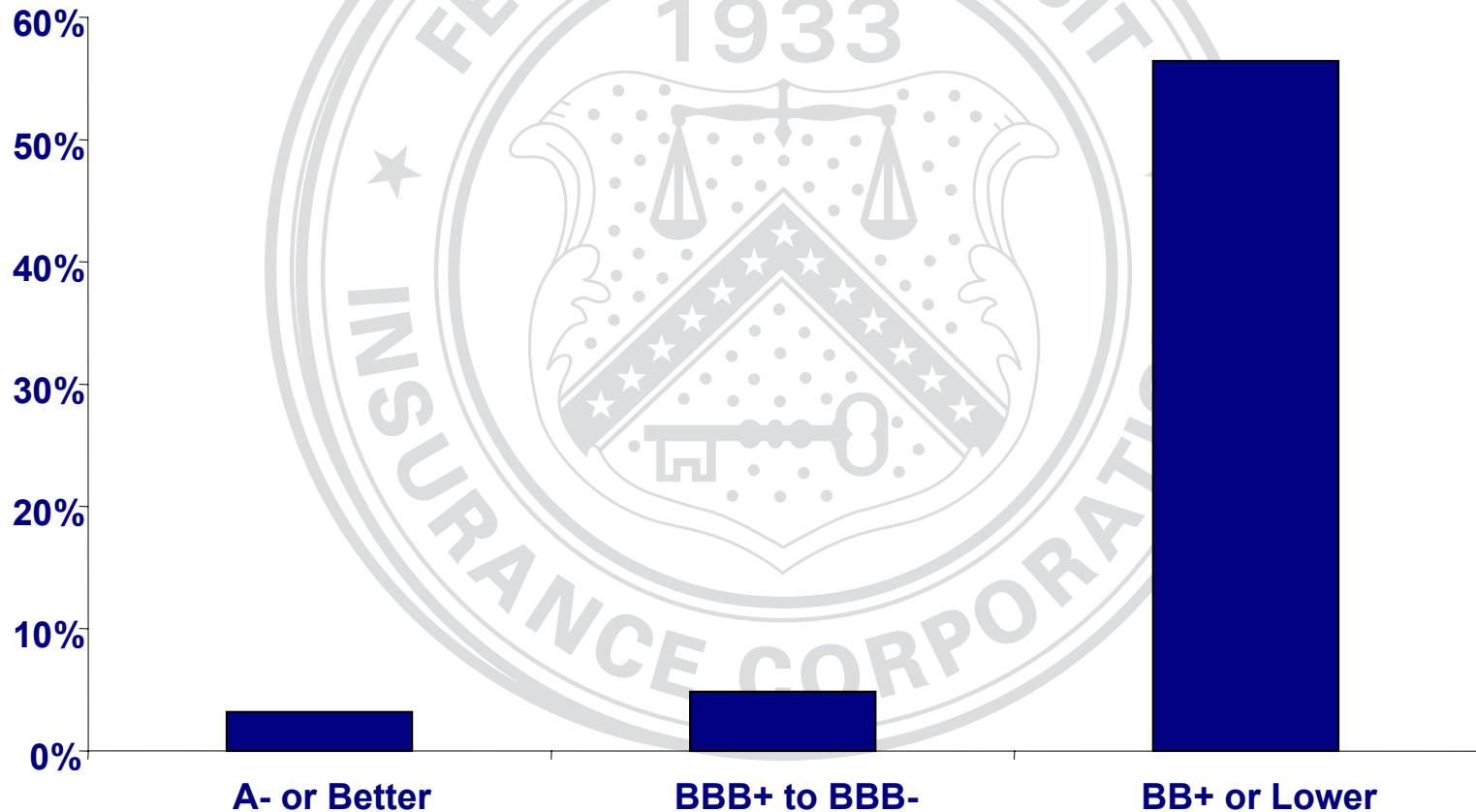


Source: Interactive Data Corporation

Market Indicators Appear to Differentiate Risk Among Larger Institutions

External Ratings:

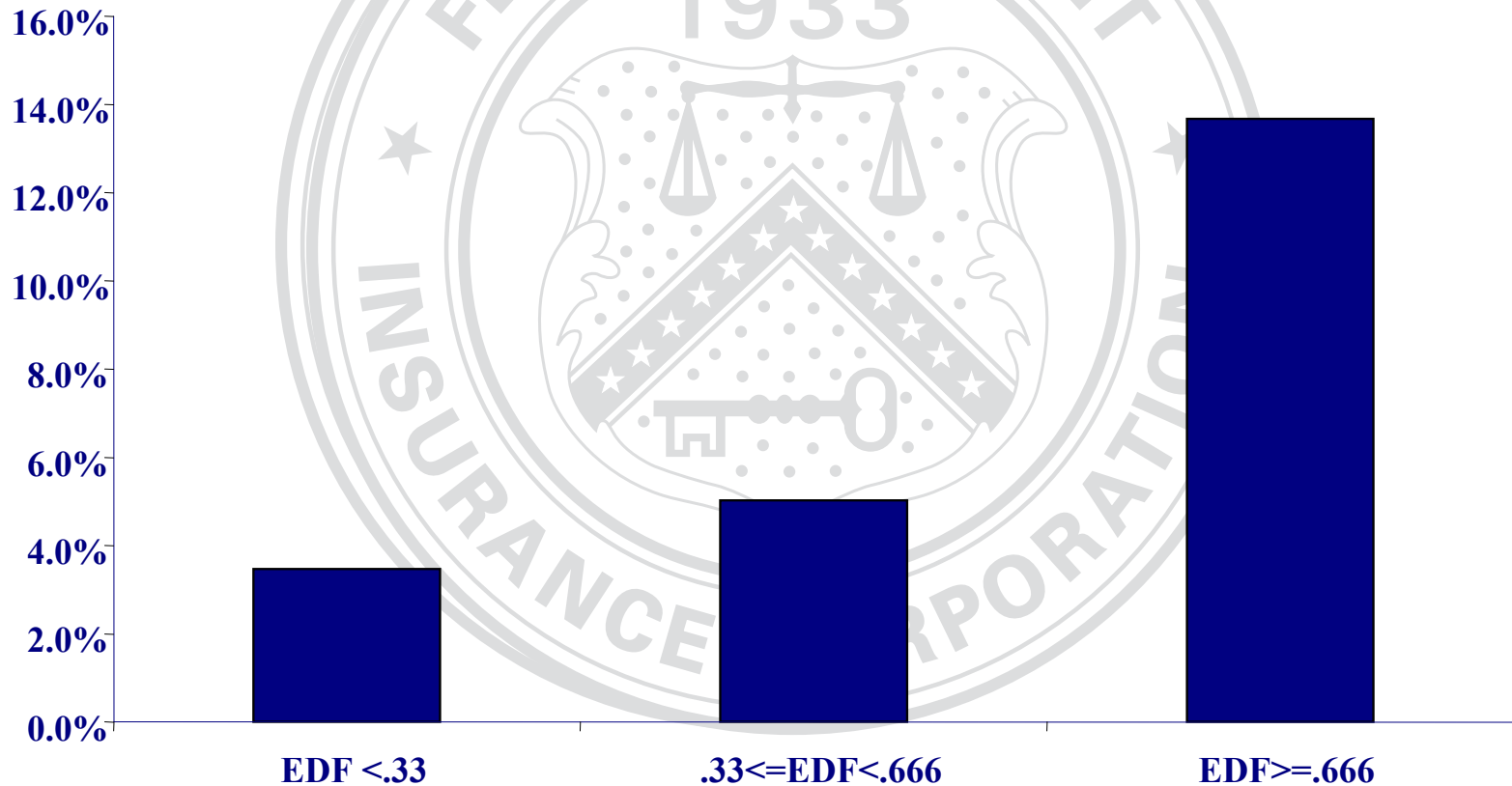
Percentage of Top 25 Institutions (Lead Banks) Downgraded to CAMELS '3' or Worse within 2 Years



Market Indicators Appear to Differentiate Risk Among Larger Institutions

KMV EDF Scores:

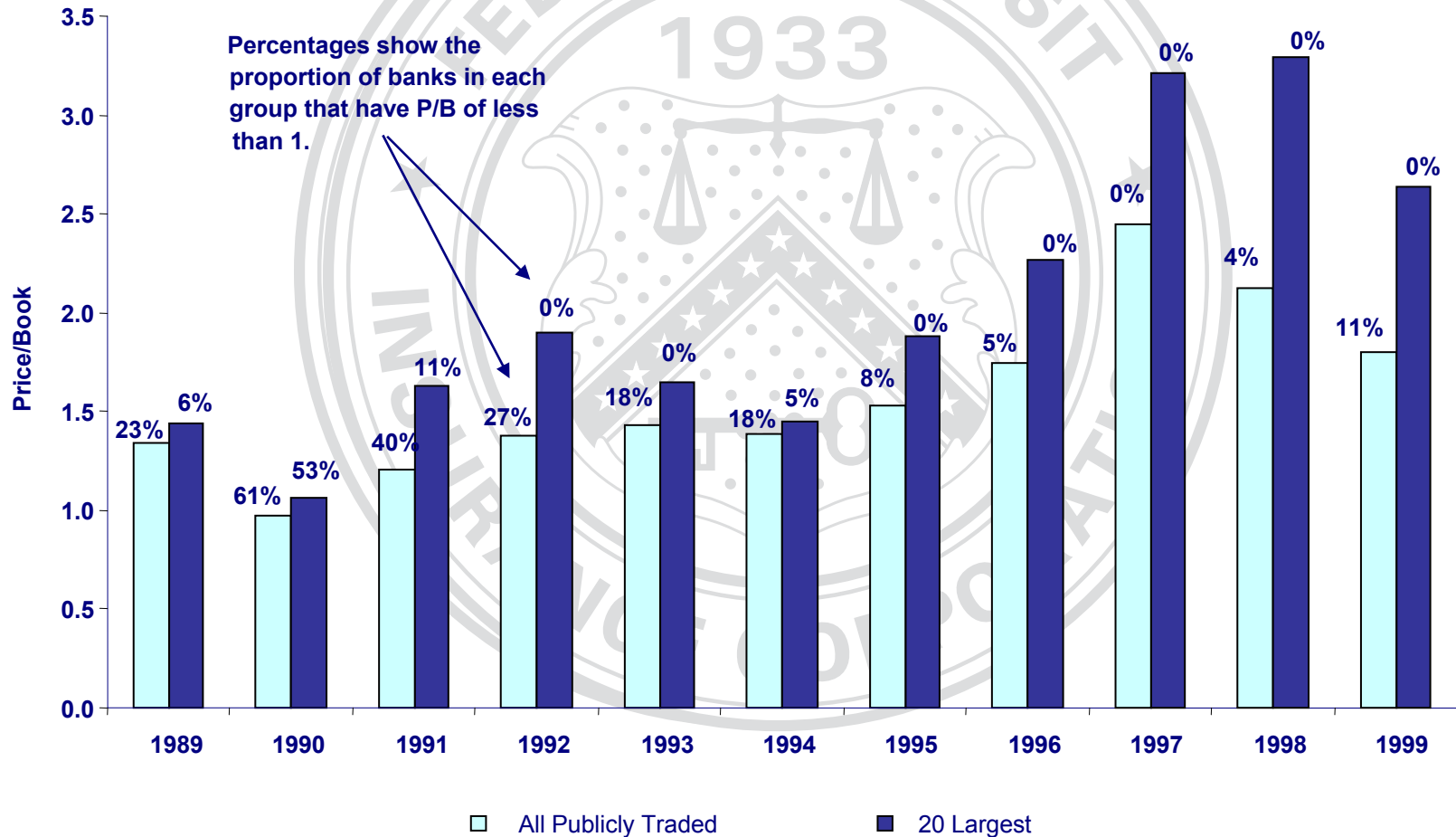
Percentage of Top 25 Institutions (Lead Banks) Downgraded to CAMELS '3' or Worse Within 2 Years



Market Indicators Could Also Be Used as a Trip-Wire to Higher Premiums

Price-to-book Adjustments:

Average Price/Book 1989-1999



Market Indicators Provide Evidence of Asset Valuations and Default Expectations

Contingent Loss Reserves:

- Need estimates of losses in the event of failure.
- Market asset values are implied by equity prices, resulting in a market-based loss estimate for publicly held depositories.

Expected Failure Models:

- Estimates of projected bank and thrift failures could be enhanced by incorporating market factors into failure projection models (working paper by Curry, Fissel, Hanweck).

Practitioner Issues

Deposit insurance assessments are made at the insured subsidiary level. How can comprehensive, organization-wide risk indicators be applied to subsidiaries?

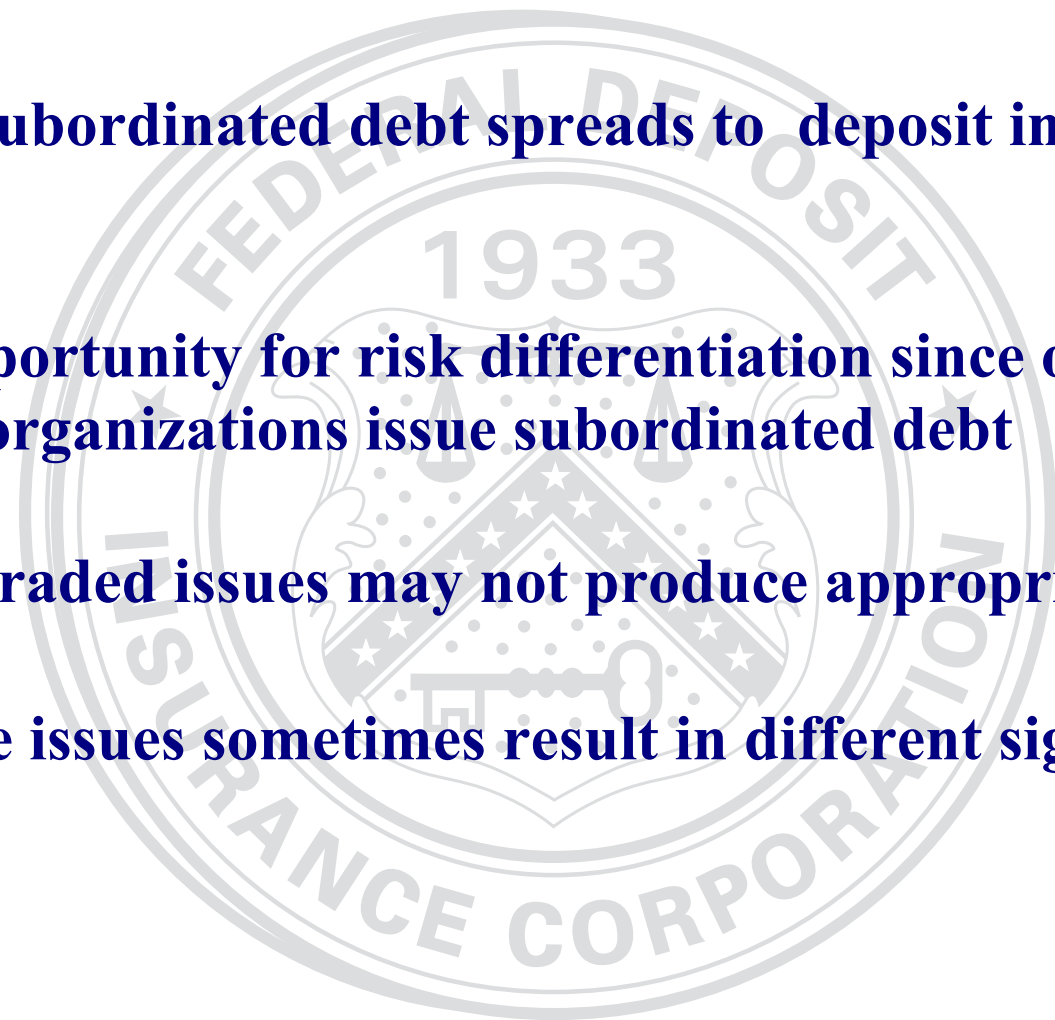
Possible Solution:

Use organization-wide risk models for ‘significant’ subsidiaries. Use other models for non-significant subsidiaries.

Practitioner Issues

Applying subordinated debt spreads to deposit insurance pricing:

- **Less opportunity for risk differentiation since only the largest organizations issue subordinated debt**
- **Thinly traded issues may not produce appropriate signals**
- **Multiple issues sometimes result in different signals**



Practitioner Issues

Effective use of market information requires integration of the data into analytical systems

- **FDIC is in the early stages of developing a market data warehouse**
- **Objectives:**
 - Link market data with banking data
 - Simplify the research process when market data is involved
 - Provide a user-friendly interface to retrieve market information quickly from a variety of sources
 - Develop automated filtering mechanisms and alerts for quick responses to unambiguous market signals
- **Considerations:**
 - **Ongoing maintenance of TIC \Rightarrow RSSD or TIC \Rightarrow CERT links**
 - **Content (e.g., include pricing on all debt instruments/stock options or should only specific securities issues be tracked)**

Conclusion

- **Market signals help validate supervisory risk assessments and enhance inter-examination surveillance.**
- **Market signals are a critical input into the formation of ‘the supervisory outlook’ for publicly held depositories.**
- **Market data provide opportunities to rank-order risk in banks in the face of less granular supervisory ratings.**
- **Market indicators could play a broader role in:**
 - **Risk differentiation in large banks for deposit insurance pricing purposes**
 - **Failure and loss estimations for establishing contingent loss reserves**
 - **Models that predict failures and supervisory ratings changes**

