Two major trends affecting the structure of the banking industry since the mid-1980s have been tremendous consolidation and the liberalization of interstate banking. Consolidation has unambiguously increased concentration at the national level. The effects on concentration in smaller geographic areas are more complicated. For one thing, mergers can involve interstate transactions, and a merger between banks in two states usually leaves both states, and their local banking markets, with the same number of banks. For another, antitrust enforcement, as well as market forces, tends to limit the impact of mergers on concentration in local markets.

This Letter looks at how bank consolidation has affected deposit concentration at the national level and in two key states in the Twelfth Federal Reserve District—Oregon and Washington. Both states have seen declines in the number of depository organizations, as well as a considerable degree of acquisition by out-of-state organizations. The analysis indicates that concentration has increased notably at the national level and for the state of Washington, but less so for Oregon. However, relatively few local markets within the states have become highly concentrated.

Trends in consolidation and interstate banking
The U.S. banking industry has seen massive consolidation since the mid-1980s. The number of independent bank and thrift organizations (collectively, depository organizations) in the U.S. fell from 15,416 in 1984 to 8,191 in 2001, a drop of 46.9%. Some of the depository organizations that have been eliminated ranked among the largest in the nation. As a result, the share of deposits held by the five largest increased from about 9% in 1984 to over 23% in 2001.

The consolidation of banking at the national level has been facilitated by the liberalization of the laws governing interstate banking. Beginning in the mid-1970s, states allowed bank holding companies headquartered in other states to acquire banks in their state. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 permitted interstate branching, whereby banks in one state could acquire banks in another state and turn the acquired branches into their own, rather than keeping the acquired bank as a separately chartered entity.

The experience with interstate banking and the effect on concentration at the state level vary considerably. Oregon has been especially affected by interstate acquisitions—as of 2001, out-of-state organizations controlled 74.2% of Oregon deposits, the second highest percentage in the nation. For Oregon, for the most part, out-of-state acquirers have merely replaced the large in-state institutions, with little effect on concentration at the state level. Thus, the deposit share of the top five institutions operating in Oregon barely has changed, increasing from 63.1% to 67.9% since 1984. (These shares are considerably higher than in states without a long history of statewide branching.) At 45.2% and ranking seventh in the nation, Washington’s out-of-state controlled deposit share also is relatively high. However, the top-five share in Washington increased more than Oregon’s, from 48.6% in 1984 to 60.5% in 2001, largely due to gains by one of the state’s own—Washington Mutual, Inc., the second largest depository institution in Washington.

Public policy concerns
From a public policy perspective, the main concern is the impact that bank mergers and acquisitions may have on local banking markets. A local banking market typically encompasses a metropolitan area or a number of rural communities that are economically linked. Survey evidence regarding where people do their banking and research linking local banking market concentration and prices, such as loan rates, suggest that banking markets retain a local dimension.
Indeed, antitrust enforcement regarding bank mergers focuses primarily on the effects on local market concentration. Under the Bank Holding Company Act, the Bank Merger Act, and other statutes, the Federal Reserve and the other bank regulatory agencies review proposed bank mergers for acceptable increases in concentration, post-merger levels of concentration, and post-merger market shares.

Regulatory approval of a merger may require a divestiture of acquirer or target branches in the relevant markets to a third party such that the resulting change in concentration is acceptable. On the other hand, mitigating factors may argue for approval in a particular market. For example, the relevant market may have strong population growth, indicating the likelihood of a rapidly increasing demand for banking services. In such a case, the market would be expected to attract new entrants at an above average rate, which would tend to alleviate the increase in concentration due to the merger.

Concentration in local markets

Interstate mergers usually would not have affected concentration at the local level, since the acquirer and the target would have operated in different states and therefore, usually, in different local markets. However, intrastate mergers, even among the smaller organizations, and failures could have had a significant impact. Therefore, the change in the number of depository organizations within a state is an important indicator of the potential effects of consolidation on local markets. Between 1984 and 2001, the number of depository organizations in Oregon declined 46.1%, from 102 to 55, while the number in Washington declined 30%, from 160 to 112.

Regulators assessing the effect of mergers on concentration in local banking markets typically rely on a statistic called the Herfindahl–Hirschman Index (HHI), which is calculated by summing the squares of the individual percent market shares of all the participants in a market. For example, a market with four firms with market shares of 30%, 30%, 20%, and 20% has an HHI of 2,600. The HHI gives proportionally greater weight to the market shares of the larger firms, in accord with their relative importance in competitive interactions. The Department of Justice divides the spectrum of market concentration into three broad categories: unconcentrated (HHI below 1,000), moderately concentrated (HHI between 1,000 and 1,800), and highly concentrated (HHI above 1,800).

For Oregon and Washington, changes in local banking market concentration were computed for 15 urban markets and 26 rural markets between 1984 and 2001. In urban markets, the average HHI increased 206 points, from 1,296 to 1,502. So, on average, urban markets in Oregon and Washington stayed within the moderately concentrated range.

Regarding individual markets, 11 urban markets (73.3%) had a higher HHI in 2001 than in 1984. However, only one—Longview, Washington—moved up to being highly concentrated. After starting out at 993 in 1984, Longview’s HHI increased to 1,986 in 2001. All the other urban markets except for Walla Walla, Washington, which already was highly concentrated in 1984, remained moderately concentrated.

In rural markets, the average HHI increased 75 points, from 2,095 in 1984 to 2,170 in 2001. So, on average, rural markets in Oregon and Washington already were highly concentrated in 1984, and became only very slightly more concentrated.

In 14 rural markets (53.9%), the HHI was higher in 2001 than in 1984. Among these, seven markets went from being moderately concentrated in 1984 to highly concentrated in 2001. These were the Coos Bay, Hood River, Lincoln County, Pendleton, and Roseburg markets in Oregon, and the Sunnyside and Wenatchee markets in Washington. Four of these—Coos Bay, Pendleton, Roseburg, and Sunnyside—now have HHIs more than 300 points above the highly concentrated benchmark of 1,800. However, given that 9 of the 12 rural markets that already were highly concentrated in 1984 became less concentrated by 2001, it is possible that concentration in some of these newly highly concentrated markets rural markets eventually also may fall.

Conclusion

Consolidation in banking has left its mark on concentration in the Northwest. At the state level, concentration has increased slightly in Oregon, more so in Washington. Among local banking markets, concentration increased both on average and in the majority of urban and rural markets. However, relatively few markets moved into the highly concentrated range—one urban market and about one-fourth of the rural markets. Even among the rural markets, the average increase in market concentration has been limited.

Liz Laderman
Economist
FRBSF Economic Letter

3 Number 2002-21, July 26, 2002

BANKS HEADQUARTERED BY REGION
MARCH 31, 2002

(NOT SEASONALLY ADJUSTED, PRELIMINARY DATA)
(BANKS WITH ASSETS LESS THAN OR EQUAL TO $1 BILLION ARE DEFINED AS SMALL)

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### ASSETS AND LIABILITIES — $ MILLION

#### ASSETS

- **TOTAL**
  - FRBSF Economic Letter 3 Number 2002-21, July 26, 2002
- **FOREIGN**
- **DOMESTIC**

#### LOANS

- **TOTAL**
- **FOREIGN**
- **DOMESTIC**
- **REAL ESTATE**
- **COMMERCIAL RE**
- **SINGLE FAMILY RES**
- **COMMERCIAL**
- **CONSUMER**
- **CREDIT CARDS**
- **AGRICULTURAL**
- **OTHER LOANS**

#### INV. SECURITIES

- **TOTAL**
- **U.S. TREASURIES**
- **U.S. AGENCIES, TOTAL**
- **U.S. AGENCIES, MBS**
- **OTHER MBS**
- **OTHER SECURITIES**

#### LIABILITIES

- **TOTAL**
- **DOMESTIC**

#### DEPOSITS

- **TOTAL**
- **FOREIGN**
- **DOMESTIC**

#### OTHER BORROWINGS

- **TOTAL**

#### EQUITY CAPITAL

- **TOTAL**
- **EQUITY CAPITAL**

#### LOAN LOSS RESERVE

- **TOTAL**
- **LOAN LOSS RESERVE**

#### LOAN COMMITMENTS

- **TOTAL**
- **LOAN COMMITMENTS**

### QUARTERLY EARNINGS AND RETURNS — $ MILLION

#### INCOME

- **TOTAL**
- **INTEREST**
- **FEES & CHARGES**

#### EXPENSES

- **TOTAL**
- **INTEREST**
- **SALARIES**
- **LOAN LOSS PROVISION**
- **OTHER**

#### TAXES

- **TOTAL**
- **TAXES**

#### NET INCOME

- **TOTAL**
- **NET INCOME**

#### ROA (% Annualized)

- **TOTAL**
- **ROA (% Annualized)**

#### ROE (% Annualized)

- **TOTAL**
- **ROE (% Annualized)**

#### NET INTEREST MARGIN (% Annualized)

- **TOTAL**
- **NET INTEREST MARGIN (% Annualized)**

### ASSET QUALITY — PERCENT OF LOANS

#### NET CHARGEOFFS (% Annualized)

- **TOTAL**
- **REAL ESTATE**
- **COMMERCIAL**
- **CONSUMER**
- **CREDIT CARDS**
- **AGRICULTURAL**

#### PAST DUE & NON-ACCURRAL

- **TOTAL**
- **REAL ESTATE**
- **CONSTRUCTION**
- **COMMERCIAL**
- **FARM**
- **HOME EQUITY LINES**
- **MORTGAGES**
- **MULTI-FAMILY**
- **COMMERCIAL**
- **CONSUMER**
- **CREDIT CARDS**
- **AGRICULTURAL**

#### NUMBER OF BANKS

- **TOTAL**

#### NUMBER OF EMPLOYEES

- **TOTAL**

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[Data Table]

**Source:** FRBSF Economic Letter 3 Number 2002-21, July 26, 2002

**Note:** The data presented is not seasonally adjusted and is preliminary in nature. Banks with assets less than or equal to $1 billion are defined as small. The data includes asset and liability breakdowns, income, expenses, taxes, net income, and asset quality metrics. Each section provides detailed financial metrics for various categories such as loans, securities, deposits, and earnings. The data is organized to compare metrics across the United States and the Twelfth District.
## Interest Rates on Loans

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**SOURCES:** SURVEY OF TERMS OF BUSINESS LENDING AND TERMS OF CONSUMER CREDIT

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