

**Banking Industry: Structure and Competition Notes**

1. Bank Balance Sheet Exercise
  2. Mini-Lecture on Main Ideas
  3. Case Study: Bank Mergers in North Carolina
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**Main Ideas****1. *Historical Development of the Banking System***

## Key Dates

1791	Bank of the US Chartered
1811	Charter Lapses
1816	Second Bank of the US Chartered
1832	Jackson vetoes re-chartering Second Bank
1863	National Bank Act
1913	Federal Reserve Act
1933	Banking Act of 1933 (Glass-Steagall)
1994	Riegle-Neal Interstate Banking and Branching Efficiency Act
1999	Gramm-Leach-Bliley Financial Services Modernization Act

**2. *Financial Innovation: A change in the financial environment stimulates a search by financial institutions for innovations that are expected to be profitable.***

High inflation in the 1970's led to the creation of new financial instruments and institutions (money market mutual funds) and, ultimately, to the elimination of Regulation Q interest rate ceilings.

Variable inflation and interest rates led to the creation of adjustable-rate mortgages that permit mortgage lenders to share interest rate risk with mortgage borrowers.

Variability in commodity prices that greatly increased the risk of farming and producing goods that use farm products as inputs led to the creation of commodity futures contracts and commodity exchanges.

The development of the computer has led to a variety of electronic banking services including ATM's and online banking services.

High demand for mortgage funds led to securitization of mortgages, the process whereby mortgages are bundled together and sold in the capital market. A sufficiently large bundle produces a relatively predictable stream of payments and it is that stream which is purchased by those who buy mortgage securities.

**3. *Structure of the U.S. Commercial Banking Industry***

There are more banks in the US by far than in other countries.

Recently, as restrictions on branching and interstate banking were eliminated, consolidation of the banking industry has begun. There have been many larger mergers and acquisitions.

#### 4. Separation of Banking from Other Financial Services

The Banking Act of 1933 separated commercial from investment banking. It prohibited commercial banks from underwriting corporate securities, and from engaging in brokerage, insurance and real estate activities. It also prohibited investment banks and insurance companies from engaging in commercial banking activities. The Gramm-Leach-Bliley Act of 1999 allows securities and insurance firms to purchase banks and allows banks to underwrite insurance and securities and to engage in real estate activities.

Banks in Germany, the Netherlands, and Switzerland have a universal banking framework that creates no separation at all between institutions that provide banking, securities, real estate, and insurance services.

There are different frameworks in the U.K. and in Japan but in both cases banks could provide a wider array of services than US banks could before Gramm-Leach-Bliley.

#### 5. International Banking

In 1960, only 8 US banks had branches in foreign countries. Today, about 100 US banks have foreign branches. In 2003, only one US bank made the list of top ten (total assets) banks in the world .

Eurodollar deposits are deposits denominated in dollars that are the liabilities of financial institutions outside the US. Holding and trading Eurodollars is an important strategy for agents who wish the benefits of dollar deposits without the regulations associated with deposits in US financial institutions.

Foreign banks hold more than 9 percent of total US bank assets and account for nearly 16 percent of lending to US corporations.

**Case Study–Bank Mergers in North Carolina** (Weinberg, John A., Banking Markets in a Decade of Mergers: A Preliminary Examination of Five North Carolina Markets,” Fed Richmond *Economic Quarterly*, Winter, 2005, 55-72.

Since the late 1980s, the total number of banks in the United States has been steadily declining.

Figure 1 Number of Banks in the United States, 1972–2002

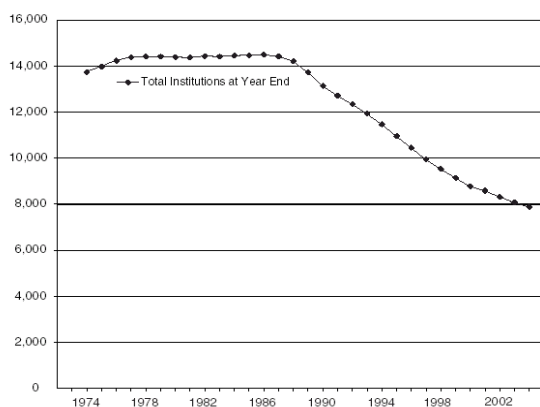
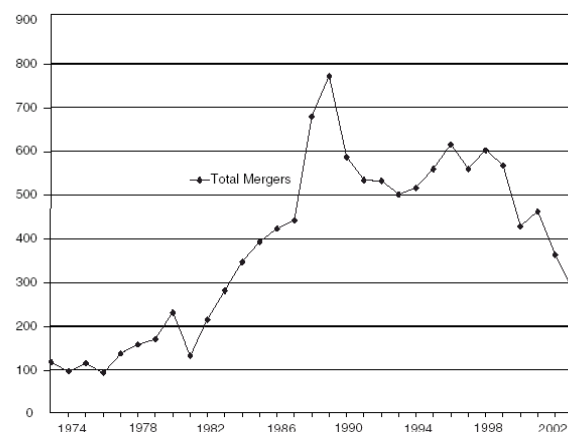


Figure 2 Bank Mergers, 1972–2002



Much of the decline has been the result of mergers and acquisitions. In the 1980's, there were many weak banks that were acquired by stronger ones. Since 1990, the mergers have typically involved the combination of strong institutions.

Market concentration is frequently measured with the Herfindahl Index, the sum of squares of sellers market shares.

$$HHI = \sum_{i=1}^N (100 s_i)^2$$

where  $s_i$  is the market share of the  $i$ th firm expressed as a decimal. A monopolized industry has an HHI of 10,000. Two equally sized firms yield a HHI of 5,000. An industry with 10 firms with equal shares has an HHI of 1,000. An industry with 100 equally sized firms has an HHI of 100. An HHI of between 1,000 and 2,000 typically indicates intense competition.

### Five North Carolina Financial Services Markets

**Table 1 Population and Population Growth 1990–2000**

Market	1990 Population	2000 Population	Percent Growth
Raleigh	541,100	797,071	47.3
Greensboro	540,030	643,430	19.1
Durham	344,625	426,793	23.8
Wilmington	200,124	274,478	37.2
Rocky Mount	133,235	143,026	7.3

**Table 2 Banking Market Characteristics in 1990**

Market	Deposits/ Population	HHI	Leading Bank's Share (%)	5 Largest Banks' Share (%)
Raleigh	\$9,990	786	15.66	45.02
Greensboro	\$11,780	747	15.05	48.13
Durham	\$8,800	1286	24.15	63.50
Wilmington	\$9,310	1008	19.98	54.13
Rocky Mount	\$16,690	1365	25.84	64.89

## How did a decade of mergers affect market structures in these NC markets?

Figure 3 Number of Banks, 1990–2002

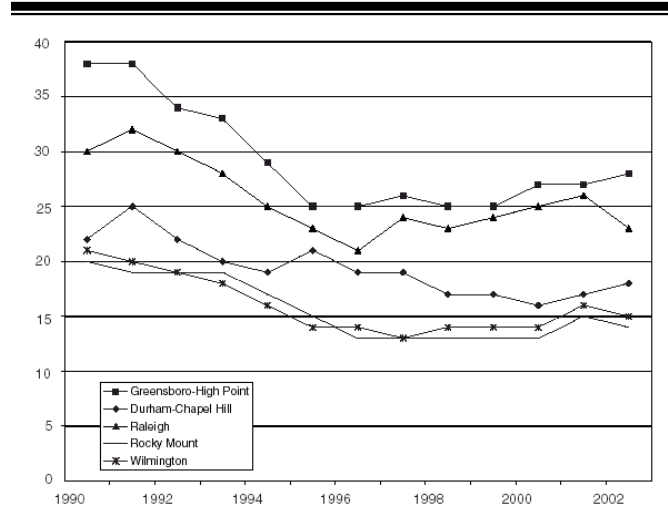


Figure 4 Offices, 1990–2002

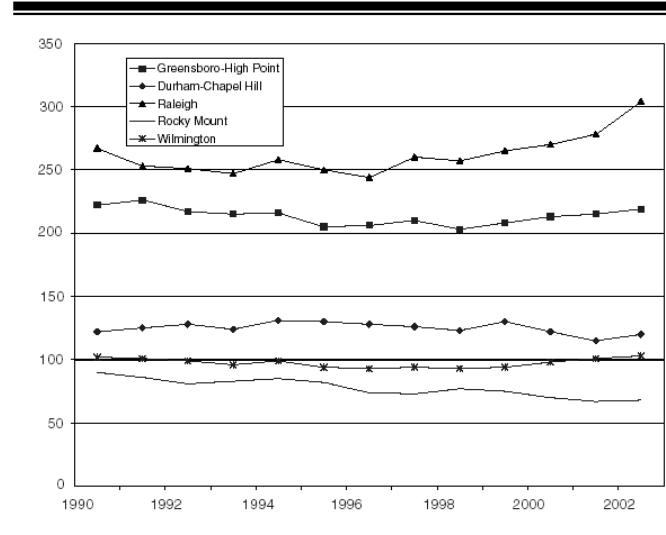


Figure 5 HHI, 1990–2002

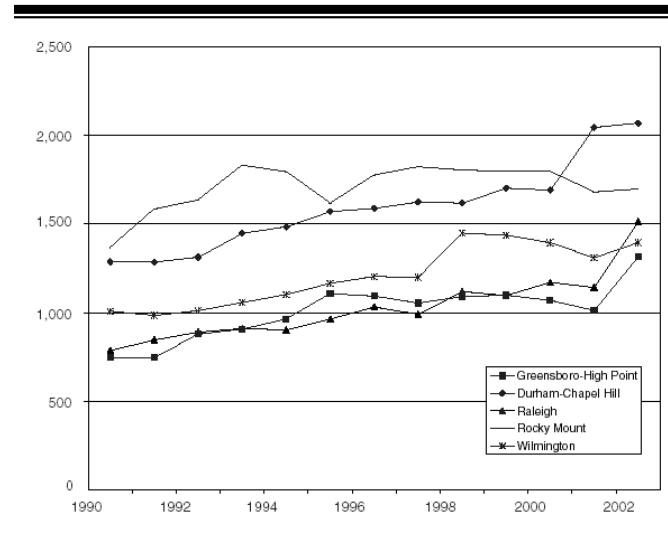


Figure 6 Share of Largest Bank, 1990–2002

