Comparing Relative Banking Performance in the Bakken with Banking in Other Shale Energy Areas

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Executive Vice President

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Maps of shale energy deposits in the United States show the Bakken region of western North Dakota and eastern Montana as one among many. But how similar are these geographies in terms of their economic and financial activities? Federal Reserve Bank of Minneapolis analysis documents that the economic and financial performance in the Bakken can differ substantially from performance in other parts of North Dakota and Montana. In the case of banks, Bakken institutions are shown to have significant growth in deposits, construction and land development loans, and commercial and industrial loans, as well as an increase in profits compared with banks in the rest of Montana and North Dakota. Similar comparisons were made between banks in shale areas of Arkansas, Louisiana, Oklahoma, Pennsylvania and Texas and banks outside those areas in the respective states. In sum, while there are some points of similarity between the relative activity of Bakken banks and banks in other shale areas, the exceptional performance of Bakken banks has generally not been replicated in other shale areas.

Deposits

Banks in other shale areas do not show relative increases in deposits as large as those in banks within the Bakken (see charts below). Bakken deposits increased 49 percent from 2010 to 2012, compared with 7 percent in the rest of Montana and 21 percent in the rest of North Dakota (data from the Summary of Deposits). The other shale areas do not show the same level of relative deposit growth. Those most similar to the Bakken deposits are within Louisiana shale counties, where deposits increased 39 percent from 2008 to 2012, while increasing 18 percent in the rest of Louisiana. However, growth in the shale area slowed from 2011 to 2012, increasing only 2.3 percent.

Deposits as reported on the Call Report show an increase in the Bakken similar to deposits in the rest of North Dakota and Montana. Within Bakken banks, total deposits began increasing more rapidly mid-year 2010. Other shale areas did not show a comparable increase. That said, growth in Call Report deposits has slowed recently in the Bakken. The annual percentage change has decreased to 13 percent as of 3/31/2013 versus a high of 27 percent as of 3/31/2012.

Loans

Bank construction and land development (CLD) loans (loans secured by real estate to fund land improvements and construction) within the Bakken have seen a rapid increase. The most recent quarter's data show these loans almost doubling during the past year, increasing 94 percent from

3/31/2012 to 3/31/2013. Over the longer 3/31/2010 to 3/31/2013 period, Bakken CLD loans increased 165 percent, from $79 million to $209 million, while decreasing 8 percent in the rest of North Dakota and 44 percent in the rest of Montana. CLD loans within the shale areas of Oklahoma and Pennsylvania have also shown an increase relative to the rest of their respective states. The shale areas of Oklahoma have seen an increase of 29 percent from 3/31/2011 to 3/31/2013, compared with a decrease of 12 percent in the rest of the state. Meanwhile, CLD loans within the Pennsylvania shale area increased 20 percent from 3/31/2009 to 12/31/2012, compared with a decrease of 44 percent in the rest of Pennsylvania.

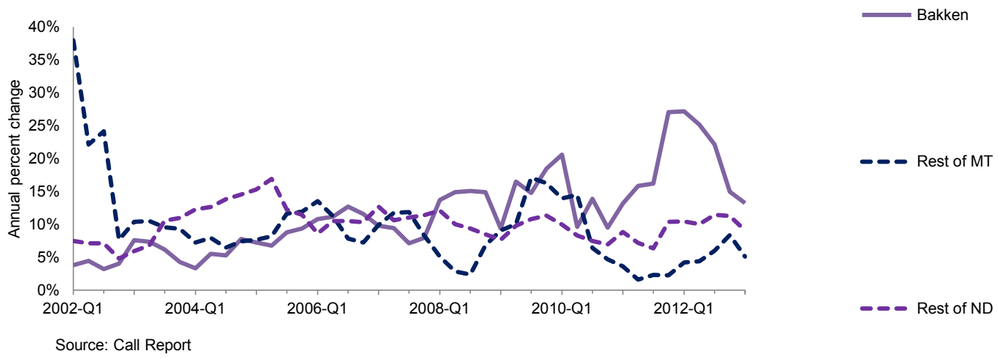
Growth in commercial and industrial (C&I) loans within the Bakken is not observed in any of the other shale areas. From 12/31/2011 to 3/31/2013, C&I loans increased 29 percent in the Bakken, compared with 2 percent in the rest of Montana and 14 percent in the rest of North Dakota.

Profits

Profitability of Bakken banks, as calculated by return on average assets, remains higher relative to other banks within Montana and North Dakota. ROAA has historically been higher in the Bakken; however, it is now averaging 1.46 percent since 3/31/2009, compared with an average of .75 percent in the rest of Montana and .92 percent in the rest of North Dakota. ROAA has also been substantially higher within the shale area of Pennsylvania, averaging 1.29 percent since 3/31/2009 versus .76 percent in the rest of the state. The shale area of Arkansas has also seen slightly higher profitability since 3/31/2011, averaging 1.21 percent, compared with .93 percent in the rest of the state during the same time period. Meanwhile, profitability of banks in other shale areas was similar to the rest of their respective states.

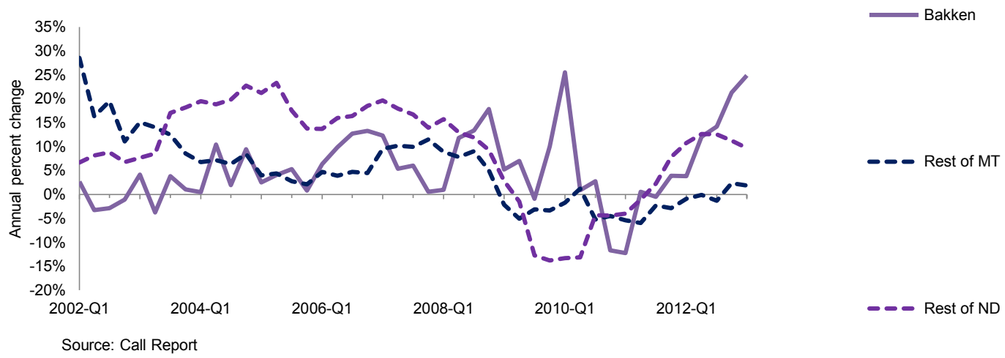
Bakken

Total deposits



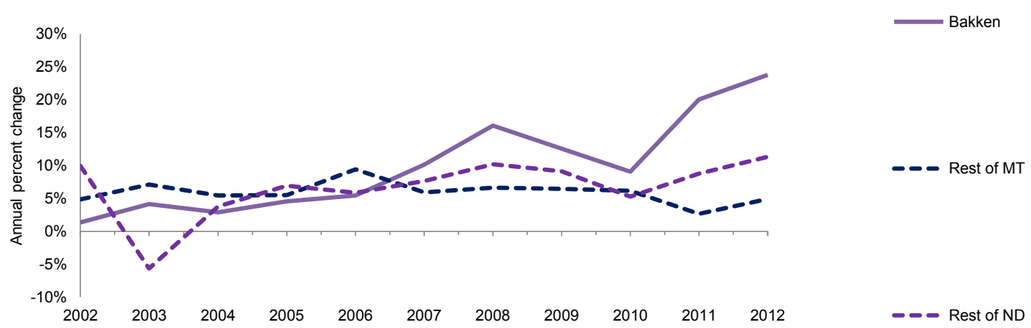
Source: Call Report

Commercial & industrial loans



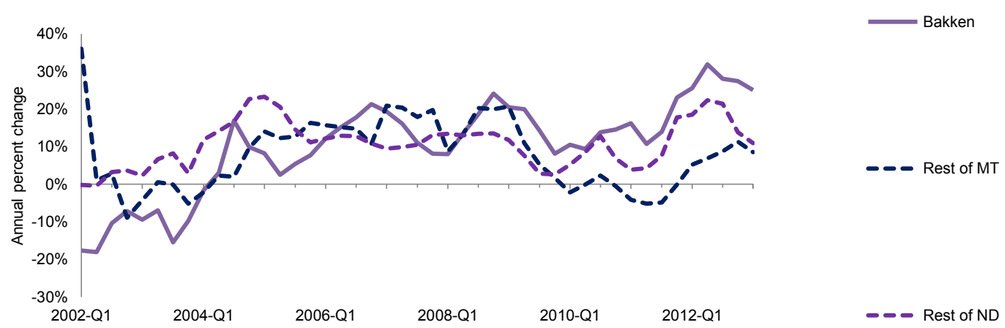
Source: Call Report

Summary of Deposits



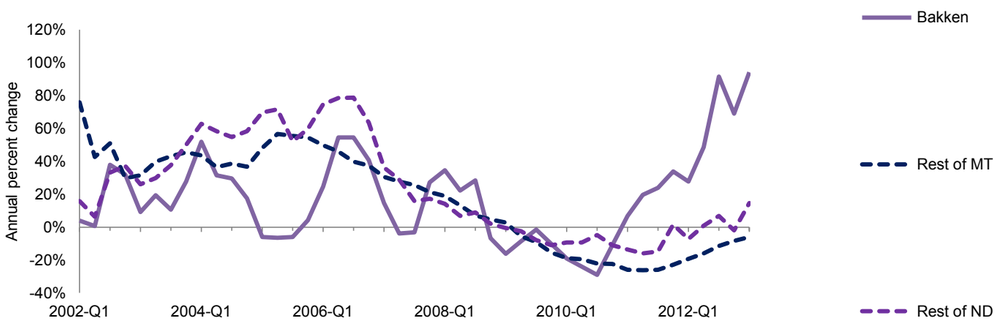
Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans



Source: Call Report

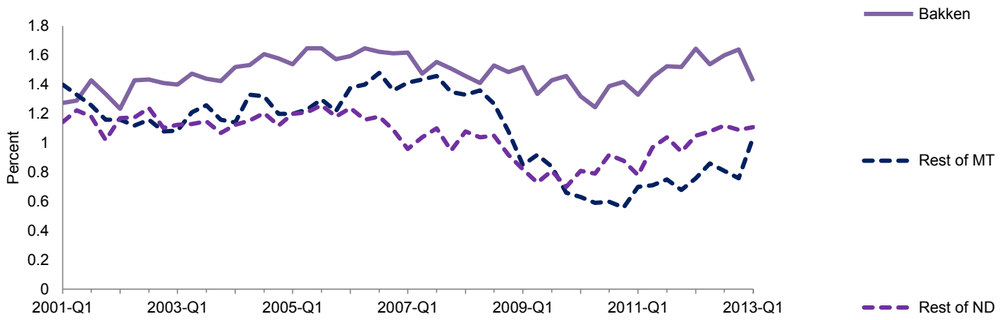
Construction & land development loans



Source: Call Report

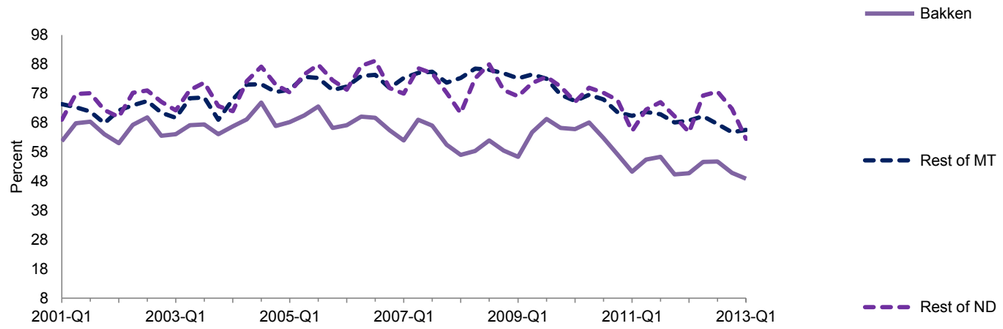
Bakken

Return on average assets



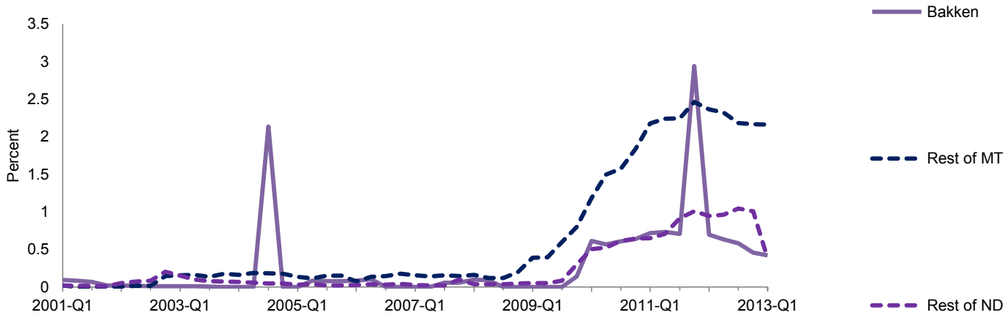
Source: Call Report

Loans to deposits



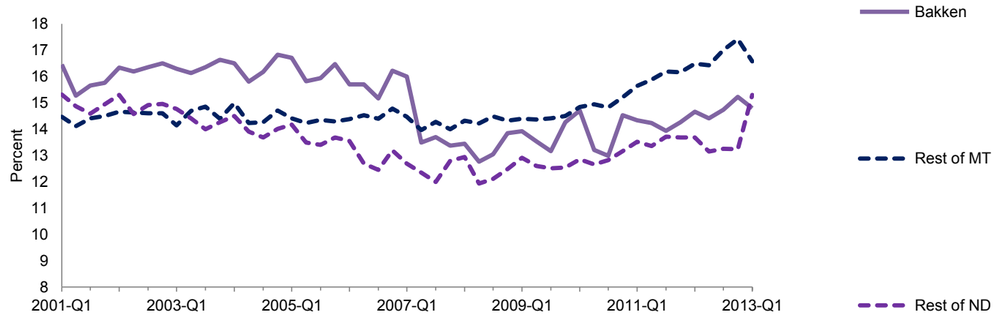
Source: Call Report

Loans 90+ days past due or in nonaccrual status as a percentage of total loans



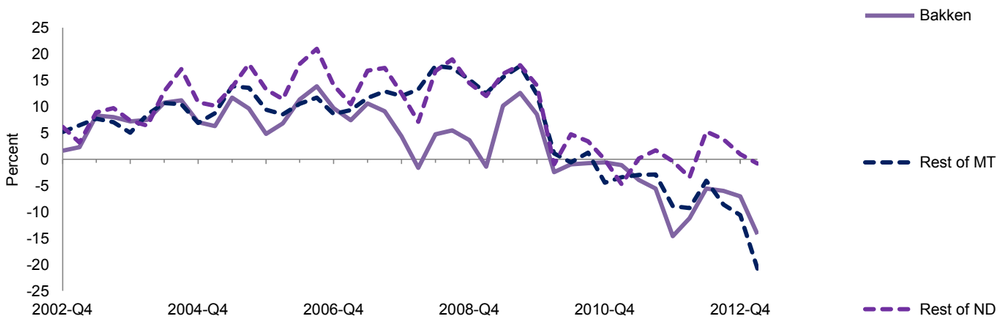
Source: Call Report

Risk based capital



Source: Call Report

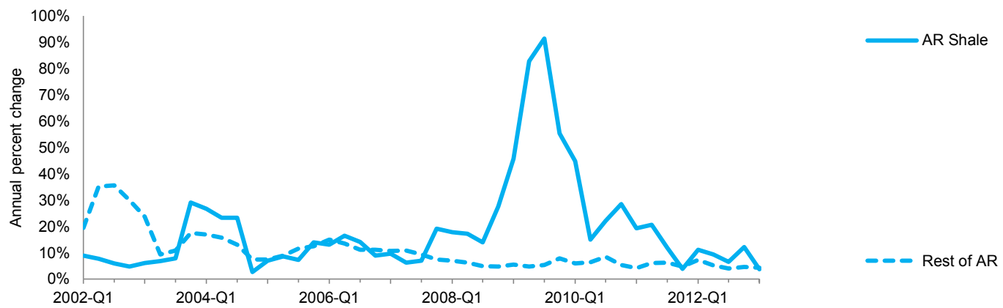
Noncore fund dependence



Source: Call Report

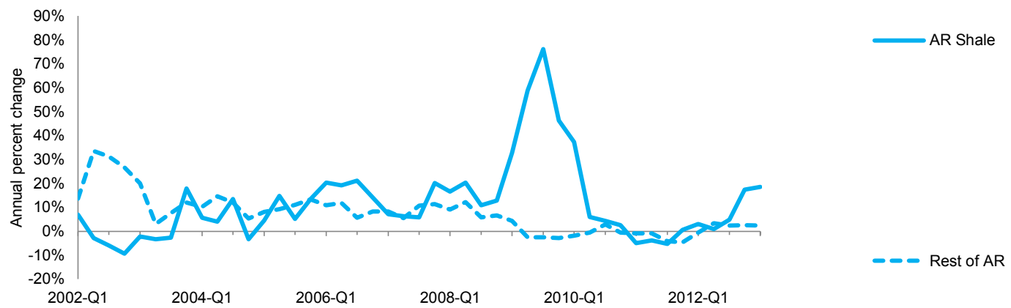
Arkansas

Total deposits



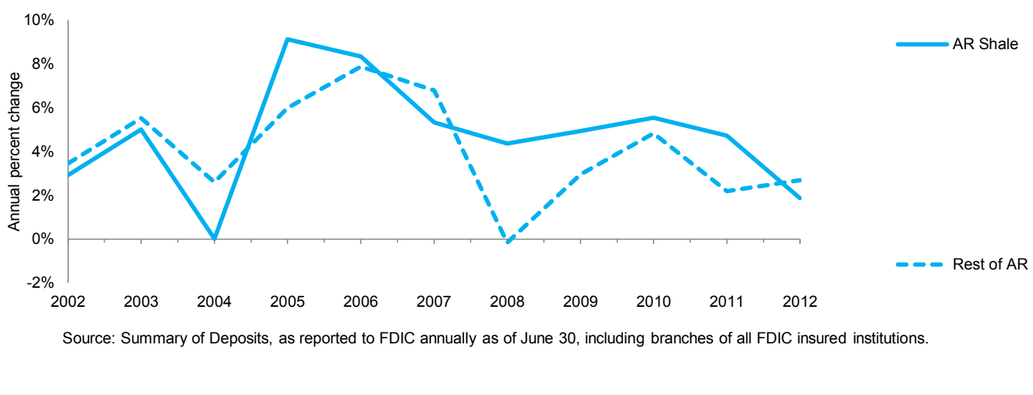
Source: Call Report

Commercial & industrial loans



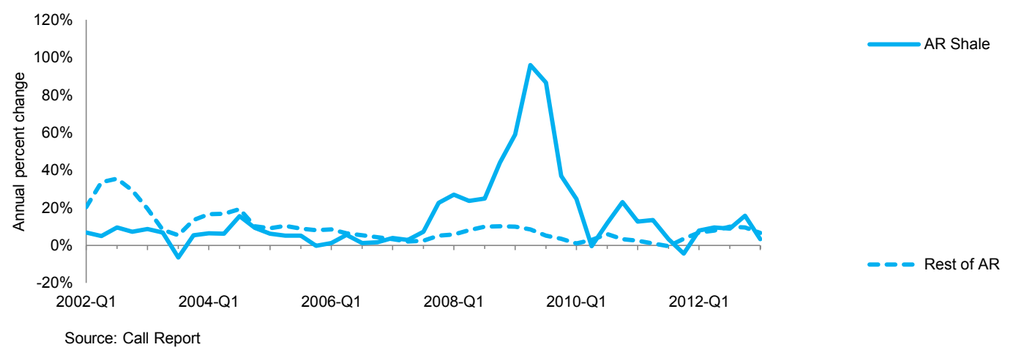
Source: Call Report

Summary of Deposits



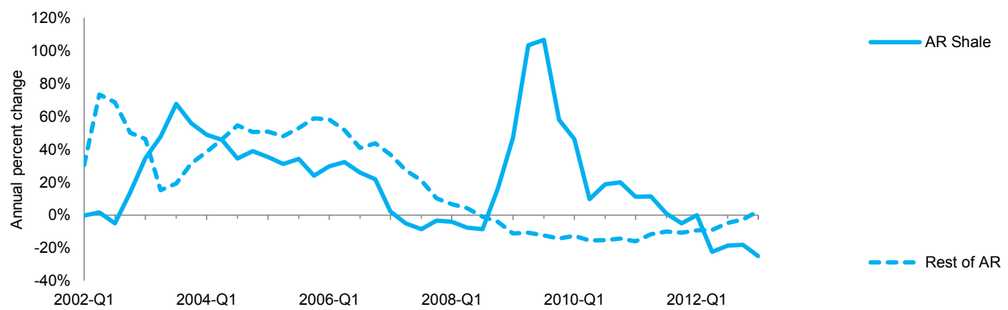
Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans



Source: Call Report

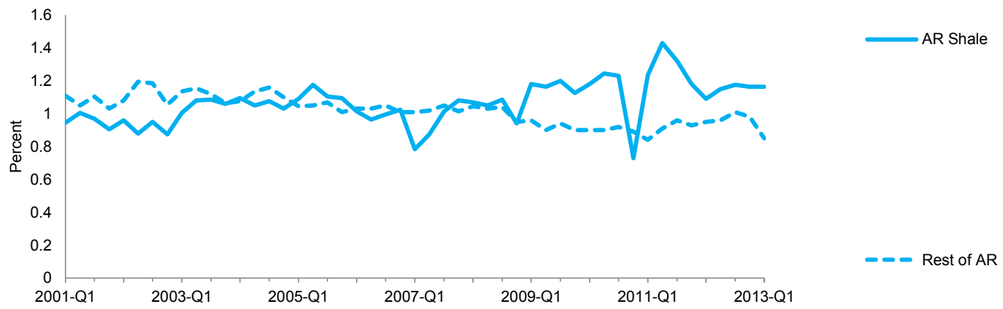
Construction & land development loans



Source: Call Report

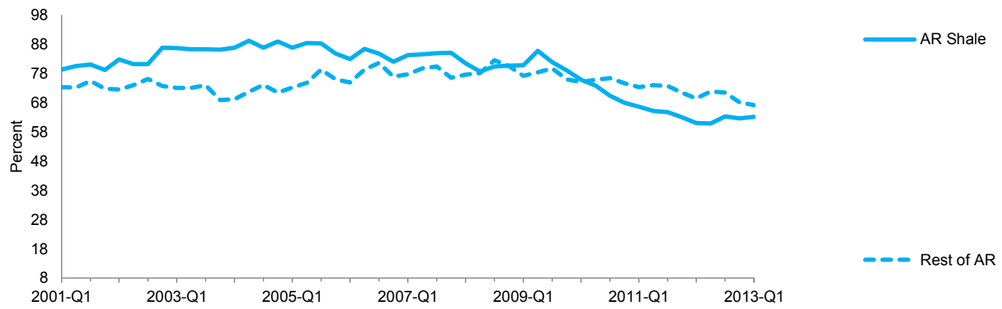
Arkansas

Return on average assets



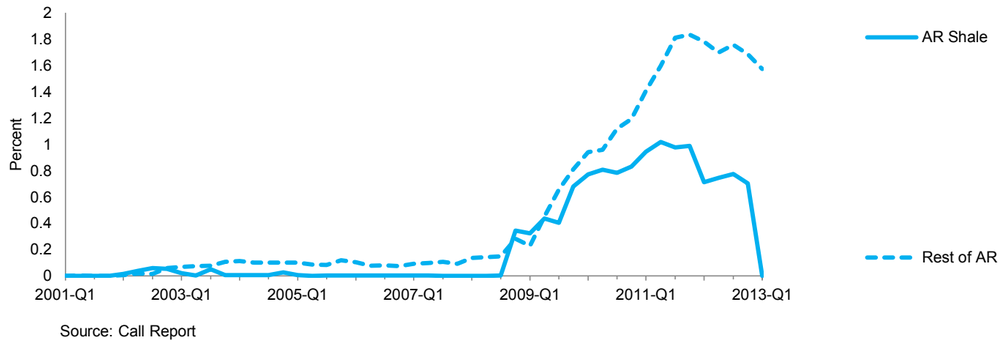
Source: Call Report

Loans to deposits



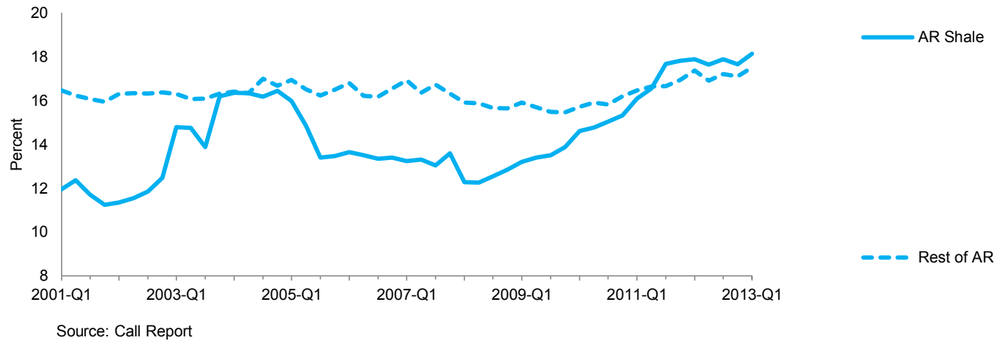
Source: Call Report

Loans 90+ days past due or in nonaccrual status as a percentage of total loans



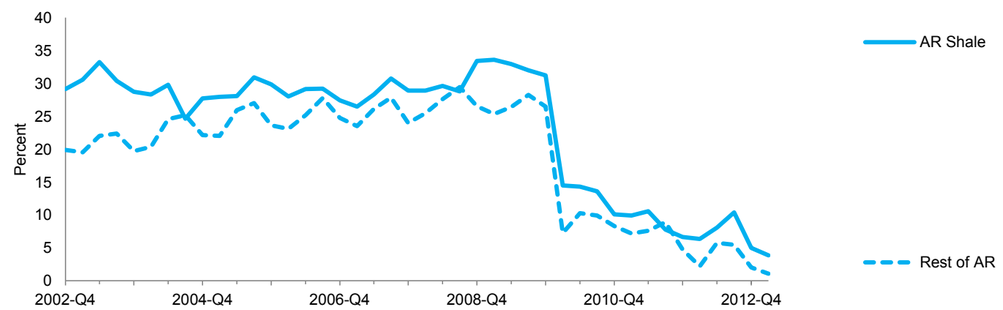
Source: Call Report

Risk based capital



Source: Call Report

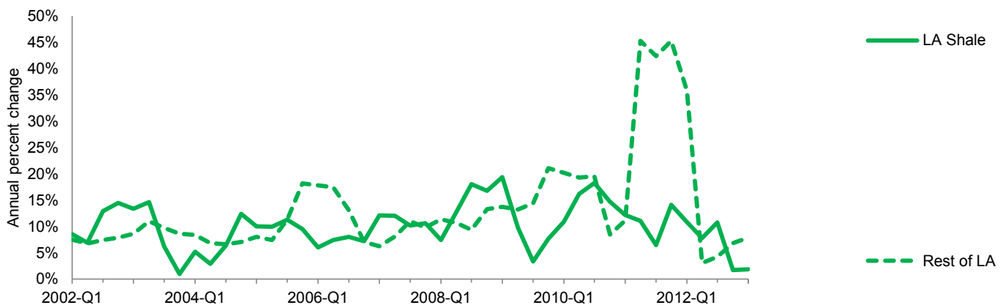
Noncore fund dependence



Source: Call Report

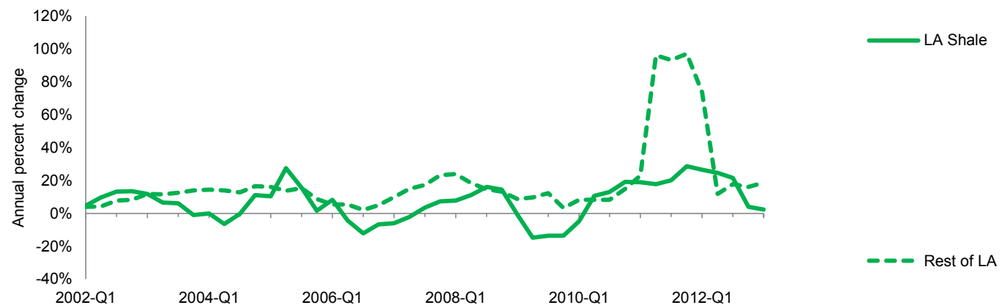
Louisiana

Total deposits



Source: Call Report

Commercial & industrial loans



Source: Call Report

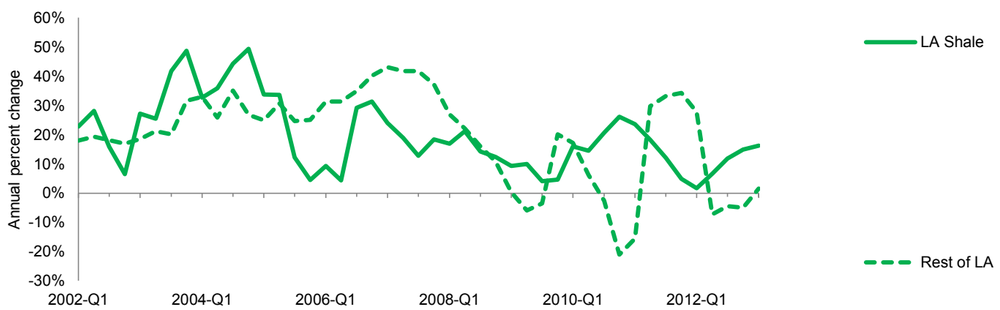
Summary of Deposits

Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans

Source: Call Report

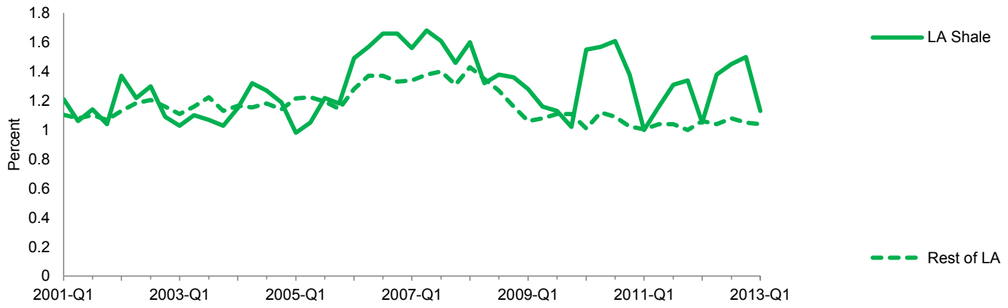
Construction & land development loans



Source: Call Report

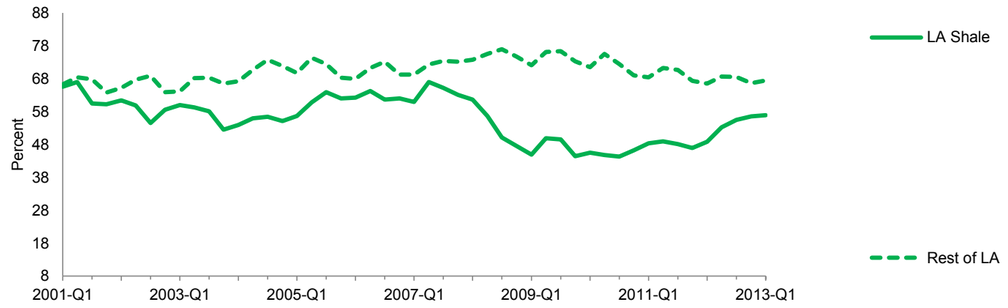
Louisiana

Return on average assets



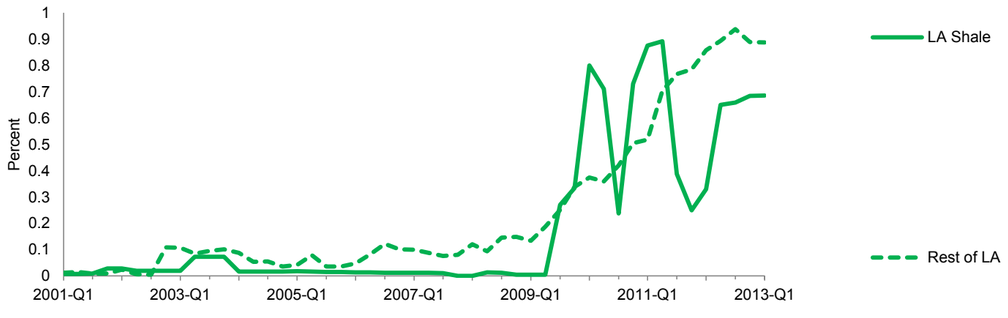
Source: Call Report

Loans to deposits



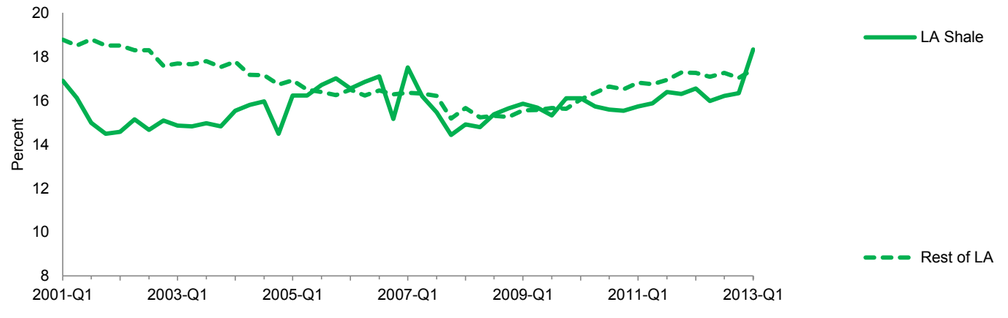
Source: Call Report

Loans 90+ days past due or in nonaccrual status as a percentage of total loans



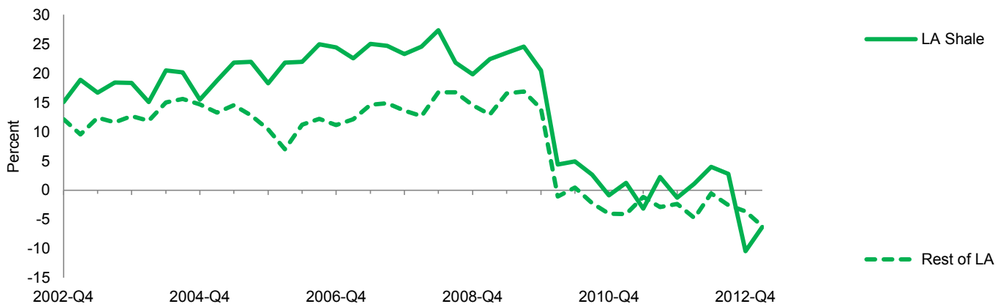
Source: Call Report

Risk based capital



Source: Call Report

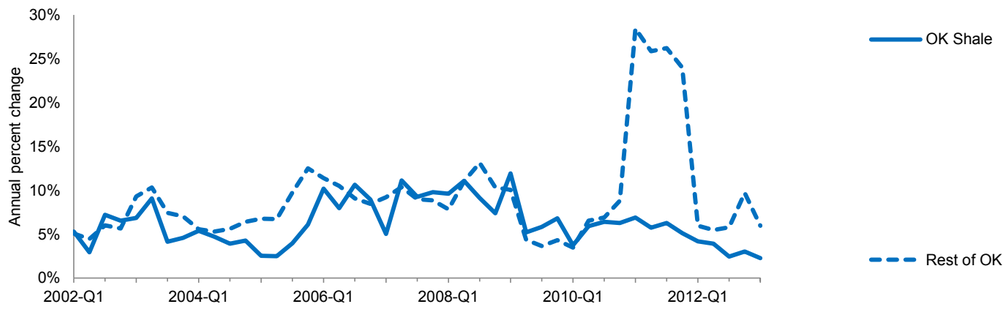
Noncore fund dependence



Source: Call Report

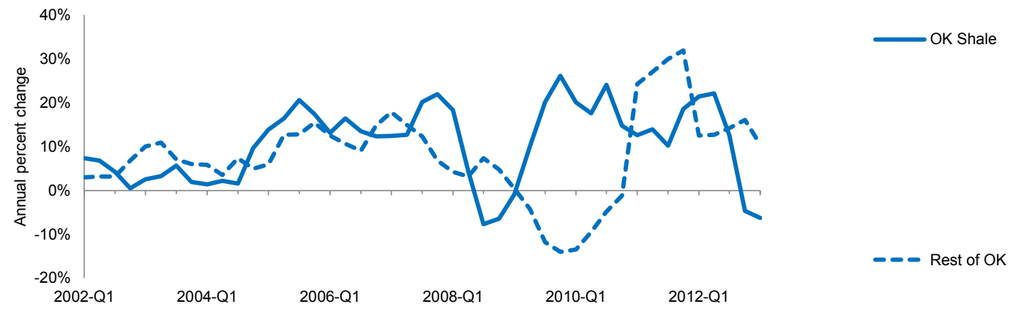
Oklahoma

Total deposits



Source: Call Report

Commercial & industrial loans



Source: Call Report

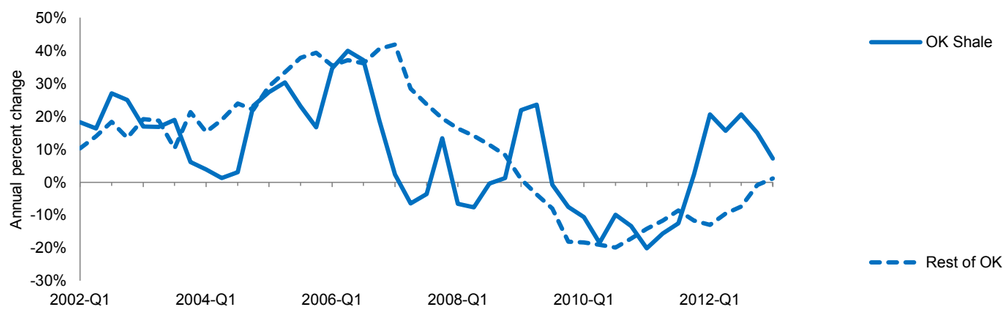
Summary of Deposits

Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans

Source: Call Report

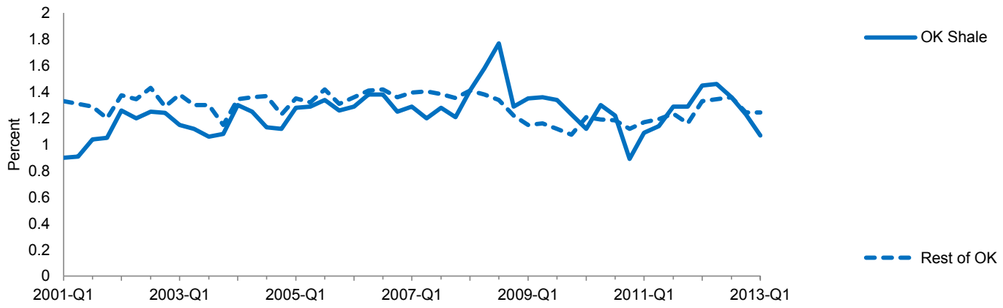
Construction & land development loans



Source: Call Report

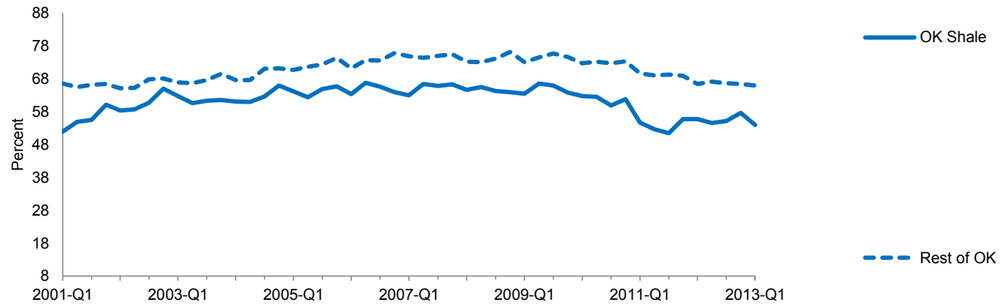
Oklahoma

Return on average assets



Source: Call Report

Loans to deposits



Source: Call Report

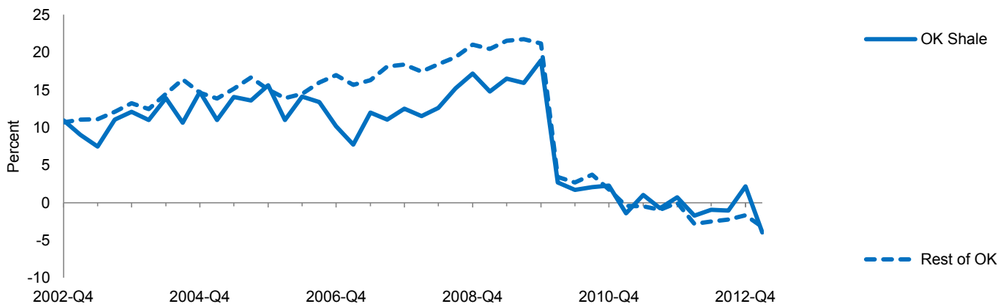
Loans 90+ days past due or in nonaccrual status as a percentage of total loans

Source: Call Report

Risk based capital

Source: Call Report

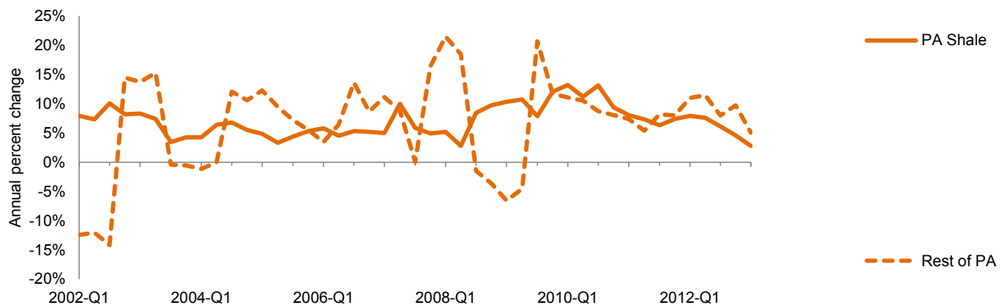
Noncore fund dependence



Source: Call Report

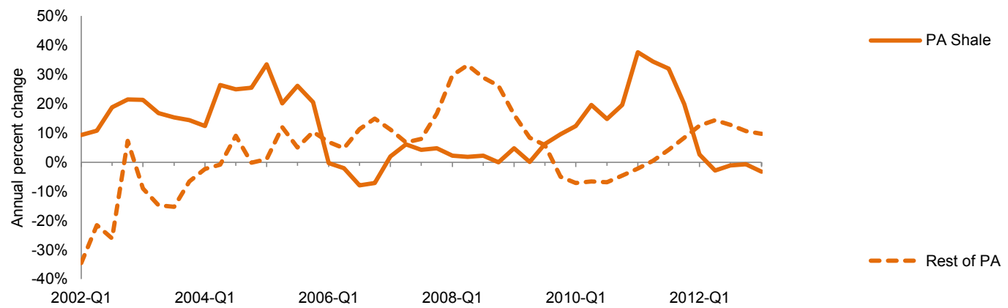
Pennsylvania

Total deposits



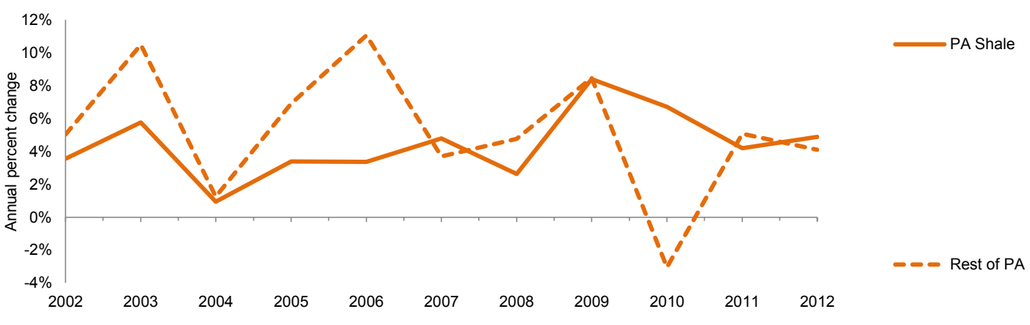
Source: Call Report

Commercial & industrial loans



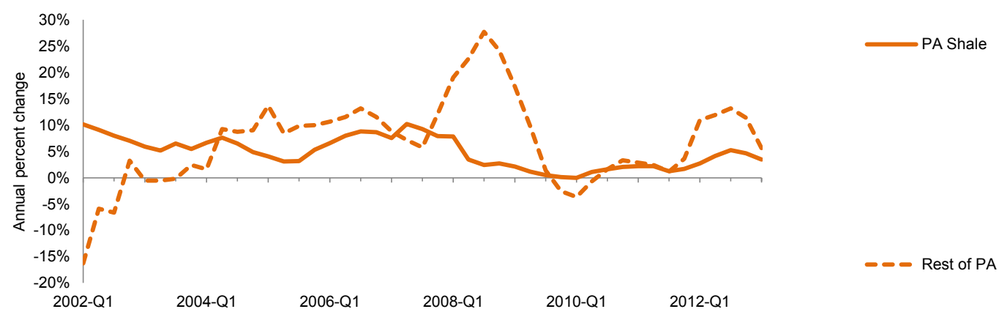
Source: Call Report

Summary of Deposits



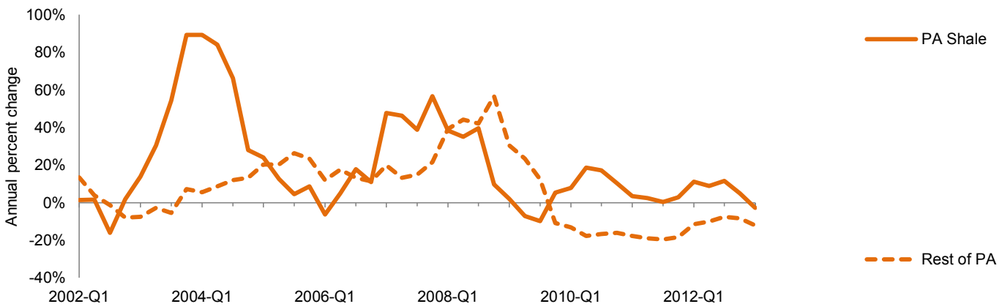
Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans



Source: Call Report

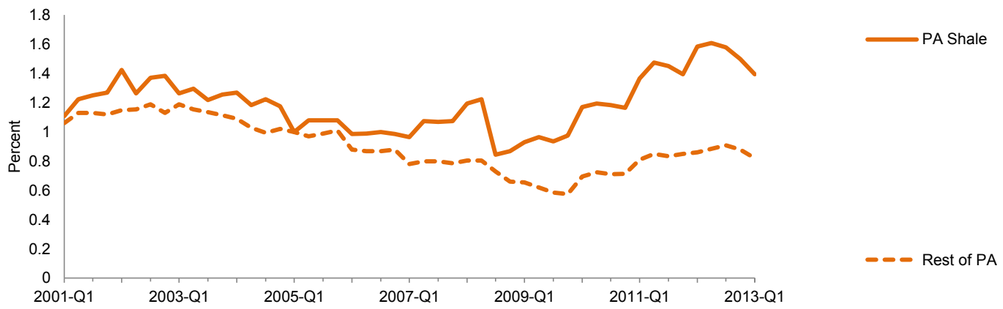
Construction & land development loans



Source: Call Report

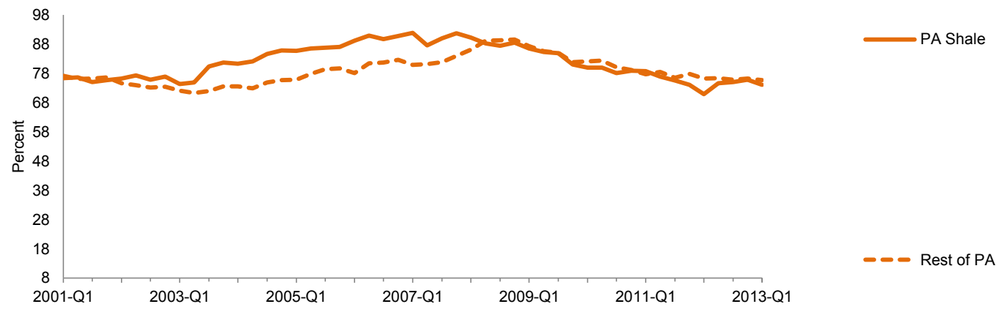
Pennsylvania

Return on average assets



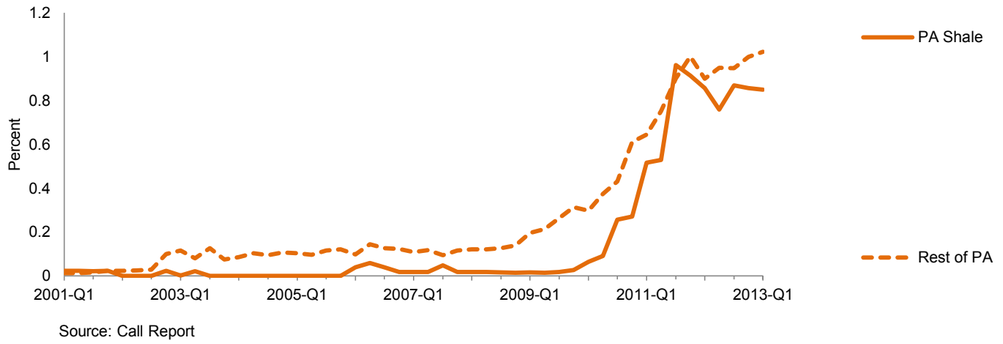
Source: Call Report

Loans to deposits



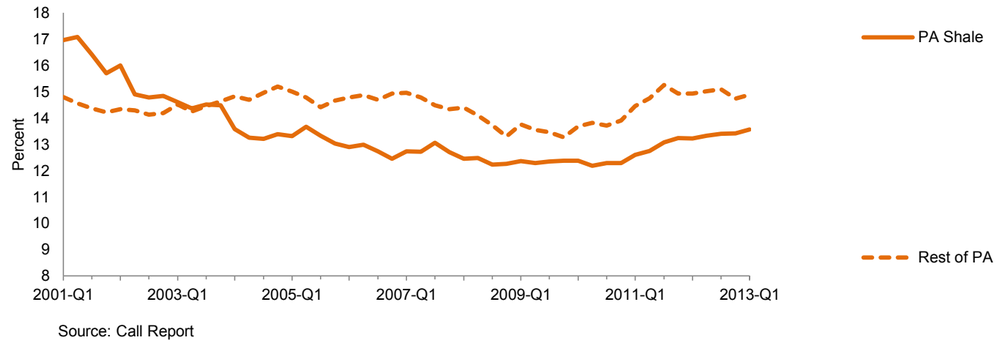
Source: Call Report

Loans 90+ days past due or in nonaccrual status as a percentage of total loans



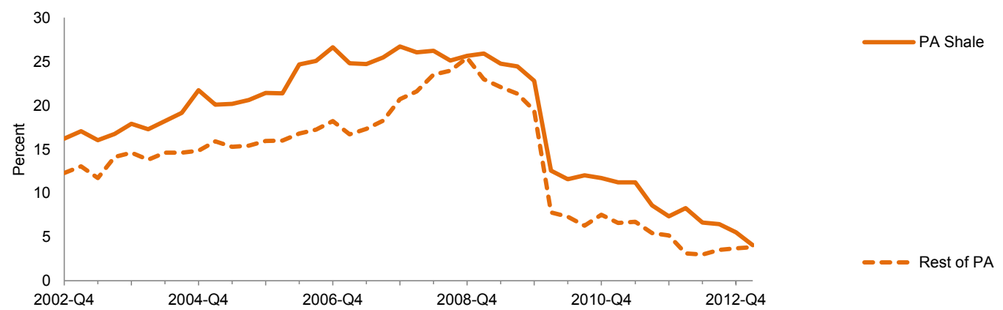
Source: Call Report

Risk based capital



Source: Call Report

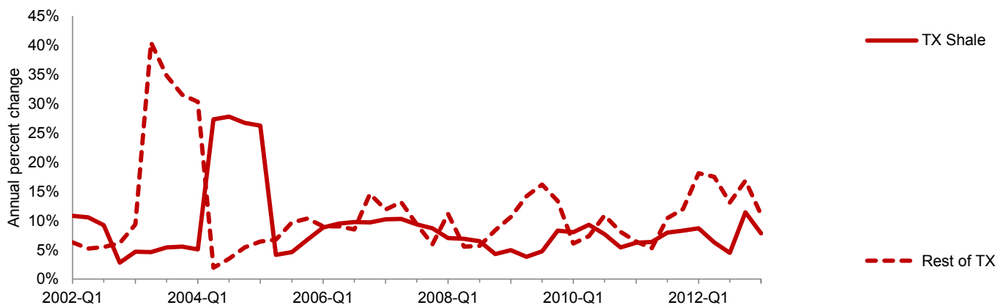
Noncore fund dependence



Source: Call Report

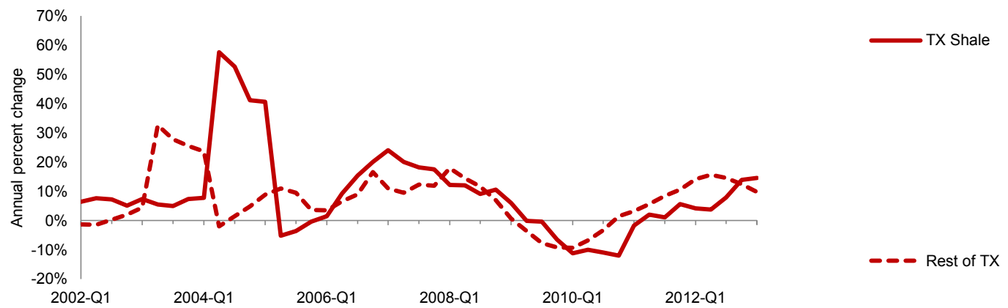
Texas

Total deposits



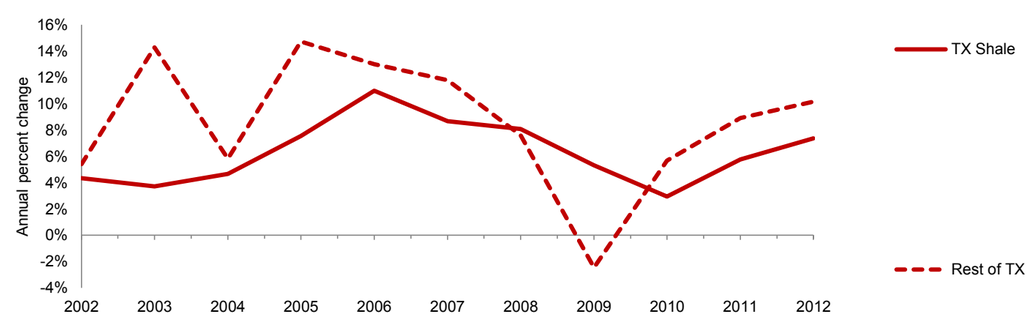
Source: Call Report

Commercial & industrial loans



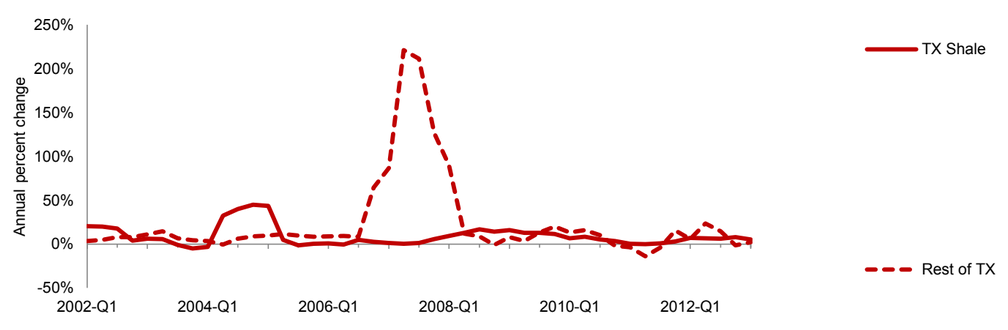
Source: Call Report

Summary of Deposits



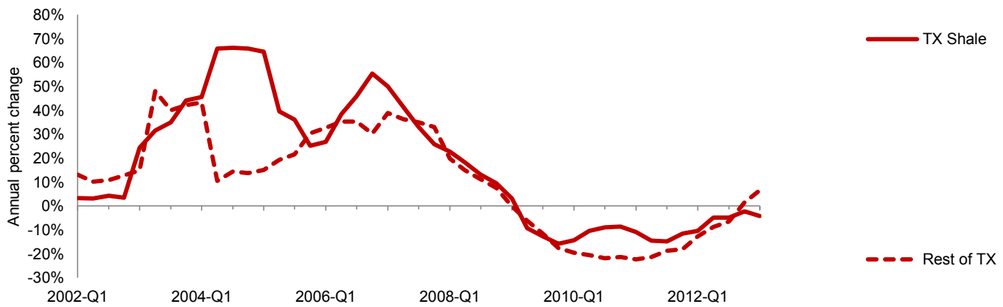
Source: Summary of Deposits, as reported to FDIC annually as of June 30, including branches of all FDIC insured institutions.

Residential loans



Source: Call Report

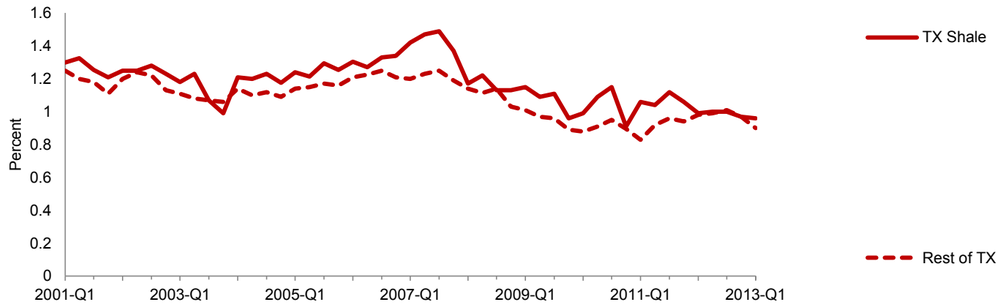
Construction & land development loans



Source: Call Report

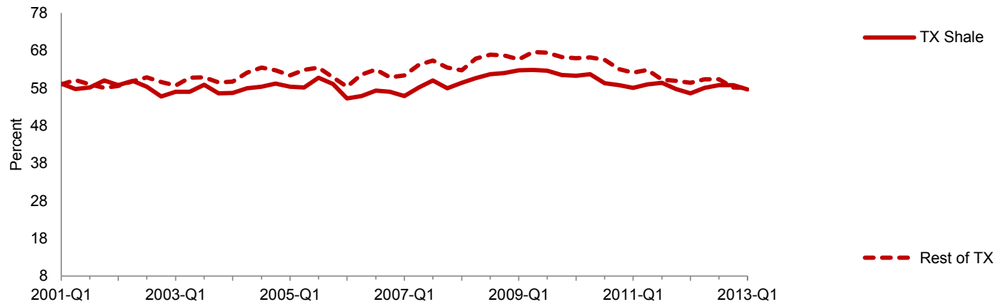
Texas

Return on average assets



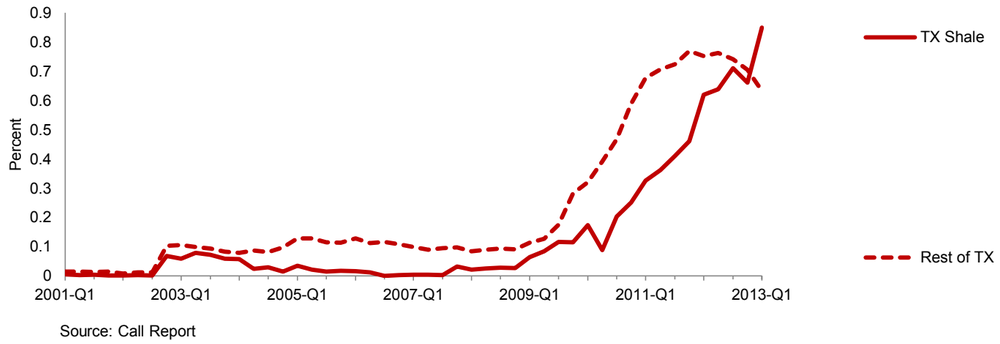
Source: Call Report

Loans to deposits



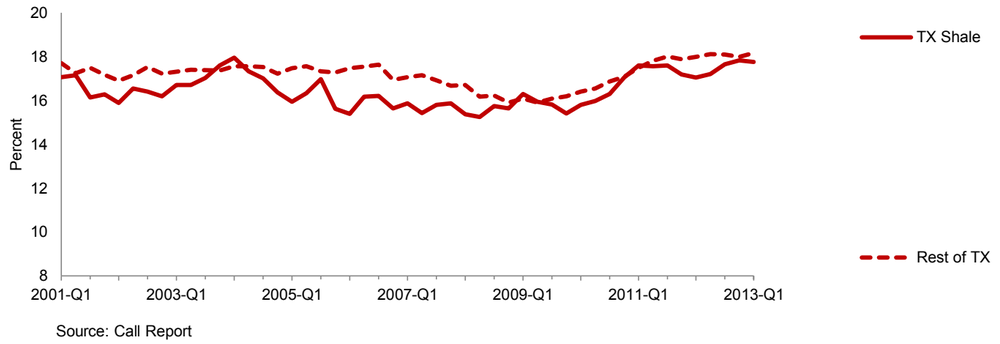
Source: Call Report

Loans 90+ days past due or in nonaccrual status as a percentage of total loans



Source: Call Report

Risk based capital



Source: Call Report

Noncore fund dependence

Source: Call Report

Appendix
Data and Definitions

Data are from the quarterly Call Report in the analysis, except where stated. Banks submit the Call Report on a consolidated basis by bank charter. As a result, only those banks headquartered within the identified shale areas and respective states are included in the analysis. Data on the activity of a bank with many branches in a shale area are not analyzed, for example, if the bank's headquarters are outside the shale area. This also means that activity from a bank chartered within a shale area may actually be activity from another geographic location, for example, a branch of the bank located outside the shale area.

In some cases, data from the Summary of Deposits (SOD) are used. The SOD is the annual survey of branch office deposits for all institutions insured by the Federal Deposit Insurance Corp. Banks report the data annually, as of June 30, to the FDIC. The SOD is a more accurate capture of deposit activity within the specific areas.

The general approach of Erik Gilje in his 2012 paper "Does Local Access to Finance Matter? Evidence from U.S. Oil and Natural Gas Shale Booms" is used to identify shale counties. In this analysis, a county is considered a "shale county" when the area has at least 100 horizontal wells. The exception to the rule is the Bakken area, which is identified by the Minneapolis Fed via qualitative means. Defining a shale energy boom area is a subjective process and may change over time. The next page includes a list of the counties analyzed, as well as the number of banks headquartered within these counties.

Data are not adjusted for mergers, except for Bakken banks.

Counties identified in shale areas (100+ horizontal wells):

Arkansas:
(6 banks chartered)
Cleburne County AR
Conway County AR
Faulkner County AR
Van Buren County AR
White County AR

Louisiana:
(11 banks chartered)
Bienville County LA
Bossier County LA
Caddo County LA
De Soto County LA
Red River County LA
Sabine County LA

Oklahoma:
(23 banks chartered)
Blaine County OK
Canadian County OK
Coal County OK
Dewey County OK
Ellis County OK
Hughes County OK
Pittsburg County OK
Roger Mills County OK
Washita County OK

Pennsylvania:
(8 banks chartered)
Bradford County PA
Greene County PA
Lycoming County PA
Susquehanna County PA
Tioga County PA
Washington County PA

Texas:
(51 banks chartered)
Brazos County TX
Cooke County TX
Denton County TX
Dimmit County TX
Erath County TX
Gonzales County TX
Harrison County TX
Hemphill County TX
Hill County TX
Hood County TX
Johnson County TX
Karnes County TX
La Salle County TX
Lipscomb County TX
Live Oak County TX
Maverick County TX
McMullen County TX
Montague County TX
Nacogdoches County TX
Ochiltree County TX
Panola County TX
Parker County TX
Potter County TX
Roberts County TX
Shelby County TX
Tyler County TX
Upton County TX
Ward County TX
Webb County TX
Wheeler County TX
Wise County TX

Counties previously identified in shale areas of Montana and North Dakota, by the Minneapolis Fed:

Montana:
(3 banks chartered)
Richland MT
Roosevelt MT
Sheridan MT

North Dakota:
(11 banks chartered)
Billings ND
Burke ND
Divide ND
Dunn ND
Golden Valley ND
McKenzie ND
Mountrail ND
Stark ND
Williams ND