JLARC
JOINT LEGISLATIVE AUDIT
AND REVIEW COMMISSION

REPORT TO THE
GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA

Placing More Treasury-managed Funds in Virginia Banks

COMMONWEALTH OF VIRGINIA
RICHMOND

SEPTEMBER 2010

In Brief

At the May 11, 2009 JLARC meeting, the Commission directed staff to study the benefits of placing more public deposits, investments, and other Virginia Treasury-managed funds with banks operating within the Commonwealth versus out-of-state institutions. The *Code of Virginia* requires that all public deposits (both State and local) be placed in banks with a presence in Virginia. Therefore, this study primarily focuses on requiring a portion of two Treasury-managed investment portfolios—the Primary Liquidity Portfolio and the Local Government Investment Pool (LGIP)—to be placed in Virginia banks.

Requiring a specified portion of these portfolios to be placed in Virginia banks could negatively impact the safety, liquidity, and return of the portfolios, and could jeopardize the LGIP's AAAm rating. The economic development and revenue impacts of placing additional public funds in Virginia banks are also uncertain and depend on how banks would use the funds. It is unlikely that any increases in revenue would offset the potential reduction in returns for the Primary Liquidity Portfolio and the LGIP. If the General Assembly were to adopt such a policy, focusing a policy on community banks and placing lending requirements on banks could increase the likelihood of positive economic development impacts and increases in revenue.

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This report is available on the JLARC website at http://jlarc.virginia.gov

COMMONWEALTH of VIRGINIA

Joint Legislative Audit and Review Commission
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Philip A. Leone
Director

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August 31, 2010

The Honorable Charles J. Colgan
Chairman
Joint Legislative Audit and Review Commission
General Assembly Building
Richmond, Virginia 23219

Dear Senator Colgan:

At the May 11, 2009, Joint Legislative Audit and Review Commission meeting, the Commission adopted a resolution directing staff to study the benefits of placing more public deposits, investments, and other Virginia Treasury-managed funds with banks operating within the Commonwealth versus out-of-state institutions. The findings of this report were presented to the Commission on July 12, 2010.

On behalf of the Commission staff, I would like to express our appreciation for assistance provided by the Virginia Department of the Treasury, the Federal Reserve Bank of Richmond, the State Corporation Commission Bureau of Financial Institutions, the Virginia Retirement System, the Virginia Bankers Association, and the Virginia Association of Community Banks. I would also like to thank staff at the College of William and Mary and the University of Virginia for assistance provided during the review.

Sincerely,

Philip A. Leone
Director

PAL/kas

Table of Contents

JLARC Report Summary:

Placing More Treasury-managed Funds in Virginia Banks

Key Findings

- As required by the *Code of Virginia*, all public deposits (both State and local funds) are in Virginia banks (defined as banks with a presence in Virginia). (Chapter 3)
- Investments of public funds in Virginia banks appear to vary with economic conditions, and the creation of the Local Government Investment Pool (LGIP) and other money market funds may have had the greatest impact on public funds' leaving Virginia banks. (Chapter 3)
- Banks' willingness to accept public funds depends partially on economic conditions. (Chapter 3)
- Requiring Treasury to place funds in Virginia banks could negatively impact the safety, liquidity, and return of the Primary Liquidity Portfolio and the LGIP, and the LGIP's AAAm rating could be jeopardized. (Chapter 4)
- The economic development and revenue impacts of placing additional public deposits in Virginia banks depend on how banks would use the funds. However, it is unlikely that any increases in State and local revenue would offset the potential reduced returns for the Primary Liquidity Portfolio and the LGIP. (Chapter 5)
- While requiring a specific portion of the Primary Liquidity Portfolio or the LGIP to be placed in Virginia banks would not be advantageous from an investment standpoint, directing a policy at community banks and placing lending requirements on banks could increase the likelihood of positive economic development impacts and related increases in revenue. (Chapter 5)

At the May 11, 2009 Joint Legislative Audit and Review Commission (JLARC) meeting, the Commission adopted a resolution directing staff to study the benefits of placing more public deposits, investments, and other Virginia Treasury-managed funds with banks operating within the Commonwealth versus out-of-state institutions. In addition, identical bills were proposed in the 2009 and 2010 General Assembly sessions that would have required Treasury to place a specified portion of the funds it manages with banks operating in Virginia.

The *Code of Virginia* requires that all public deposits (both State and local funds) be placed in banks that are qualified depositories,

Difference Between Deposits and Investments

A deposit occurs when funds are placed with a financial institution for credit to a customer's account and safekeeping.

An investment is an asset that is purchased with the anticipation that it will generate income or appreciate and be sold at a higher price.

which must have a physical presence in Virginia. (On May 31, 2010, $5.65 billion in State and local funds was on deposit in Virginia banks.) Because all public deposits are already in banks with a presence in Virginia, this study focuses on requiring a portion of Treasury-managed investments to be placed in Virginia banks. The specific investment portfolios addressed by the study are the Primary Liquidity Portfolio, which is related to the State's General Account, and the Local Government Investment Pool (LGIP), which is a Treasury-managed fund comprised largely of local government investments. The FY 2010 average annual balances for these two portfolios were $2.5 billion and $3.4 billion, respectively.

The *Code of Virginia* and the Treasury Board establish the investment goals and guidelines for both of these portfolios. The primary objectives for the funds, in order of priority, are (1) safety, (2) liquidity, and (3) return on investment. The guidelines also state that investments shall be made according to the prudent person rule—meaning that investments shall be made with the same care, skill, prudence, and diligence that a prudent person would make in similar circumstances. In addition, the guidelines require that funds be invested primarily in negotiable securities purchased on the open market although a small portion of the portfolios may be placed in non-negotiable CDs.

ECONOMIC CONDITIONS AND CREATION OF MONEY MARKET FUNDS LIKE THE LGIP HAVE HAD GREATEST IMPACT ON INVESTMENTS OF PUBLIC FUNDS IN VIRGINIA BANKS

A minority of both State and local investments of public funds are in Virginia banks, and the amount of those investments in Virginia banks appears to vary depending on economic conditions. For example, between FY 2005 and FY 2008, investments of Primary Liquidity Portfolio and LGIP funds in Virginia banks ranged from 11 percent to 22 percent of the total portfolios (based on June 30 data). However, by June 30, 2009, investments in Virginia banks for both funds dropped to less than five percent. The significant drop in 2009 was a result of Treasury's decision to move funds out of bank-issued credit securities to lower-risk government securities as a result of the global banking crisis that began at the end of 2008.

The creation of the LGIP and other money market funds in the 1970s and early 1980s appears to have been the primary impetus for public funds' leaving Virginia banks. Based on the result of a JLARC staff survey, more than 80 percent of local governments are estimated to participate in the LGIP. When asked where funds were deposited or invested prior to participation in the LGIP, the most frequently cited locations were savings and time deposits (including non-negotiable CDs) at community banks and large Virgin-

ia banks. Treasury staff indicate that, even if the LGIP had not been created, local governments likely would have invested in other money market funds that became available around that time.

BANK ACCEPTANCE OF PUBLIC FUNDS ALSO DEPENDS LARGELY ON ECONOMIC CONDITIONS

Virginia banks' willingness to accept public funds varies and also appears to depend on local economic conditions, as evidenced by Virginia's Public Funds Certificates of Deposit (CD) Program. Through this program, the State offers $85 million quarterly from the Primary Liquidity Portfolio to qualified public depositories to be placed in six-month non-negotiable CDs. In previous years, Treasury has placed up to 100 percent of the funds offered through the program with Virginia banks. Since February 2009, however, banks have only accepted between 17 percent and 45 percent of the funds offered through the program. Nearly 70 percent of banks reported that the main reason they did not accept funds through the Public Funds CD Program in 2009 was that they did not need the additional funds at the time.

POTENTIAL NEGATIVE IMPACTS ON INVESTMENT PORTFOLIOS FROM REQUIRING TREASURY TO PLACE FUNDS IN VIRGINIA BANKS

To increase the portion of Primary Liquidity Portfolio or LGIP funds in Virginia banks, Treasury could place additional funds in deposits (such as non-negotiable CDs) in Virginia banks, purchase additional investments from Virginia banks, or do a combination of both. However, requiring Treasury to place a specified portion of the Primary Liquidity Portfolio or the LGIP with Virginia banks could negatively impact Treasury's ability to meet the safety, liquidity, and return objectives for the portfolios, and could jeopardize the AAAm rating currently held by the LGIP. Treasury already has the option to place funds in Virginia banks that meet its investment criteria, and Treasury staff report doing so when it is advantageous from an investment perspective. Therefore, requiring Treasury to keep a minimum portion of the Primary Liquidity Portfolio or the LGIP in Virginia banks at all times could compromise Treasury's ability to meet the investment objectives. The point at which a specific investment requirement would become problematic is difficult to determine and may depend on market conditions and the needs of the portfolios at the time. However, as discussed above, it is not even clear whether Treasury could always place a specified portion of the portfolios with Virginia banks.

Safety Could Be Reduced Through a Loss in Flexibility

In general, deposits and investments in Virginia banks are not inherently less safe than at other banks. The safety of public deposits is maintained through the Federal Deposit Insurance Corporation (FDIC) insurance of up to $250,000 per account type per bank and the State's collateral requirements for the remaining value of the deposits. To ensure the safety of its investment portfolios, Treasury has several guidelines and procedures in place, such as credit quality requirements for the securities it purchases. However, requiring Treasury to place a portion of the Primary Liquidity Portfolio or the LGIP in Virginia banks would limit Treasury's flexibility to move funds in response to changing market conditions. As previously mentioned, between June 2008 and June 2009, Treasury shifted nearly all of the assets for both of these funds out of bank and corporate credit securities (including those at large Virginia banks) into U.S. government and government-related securities to reduce the exposure of the Primary Liquidity Portfolio and the LGIP to losses and failures that were occurring in the banking sector. A requirement to place a specified portion of funds in Virginia banks might have prevented this shift.

Placing Funds in Non-negotiable CDs Would Reduce Liquidity

Due to the use and nature of the funds making up the portfolios, the liquidity needs of the Primary Liquidity Portfolio and the LGIP are high. Placing additional funds in non-negotiable CDs, such as those purchased through the Public Funds CD Program, would reduce the liquidity of these funds because these CDs must be held until maturity to avoid penalty payments. Placing additional funds in demand or savings accounts is not expected to reduce liquidity, nor would purchasing negotiable securities from Virginia banks.

Placing Funds in Deposit Vehicles Could Negatively Impact Return

Investing additional Primary Liquidity Portfolio or LGIP funds in negotiable securities at Virginia banks is not expected to greatly affect returns for these portfolios. However, placing additional funds in deposit vehicles could negatively impact their returns. The most likely financial instrument in which funds would be placed at community banks is non-negotiable CDs. Interest rate data from a select number of Virginia banks shows that placing Primary Liquidity Portfolio or LGIP funds in non-negotiable CDs could reduce returns for these portfolios depending on market conditions. When overall market conditions are strong, non-negotiable CDs are more likely to result in lower returns compared to the yield Treasury could obtain by investing these funds in negotiable

securities on the open market. Placing additional funds in non-negotiable CDs at or below the rate Treasury currently receives through the Public Funds CD Program, or placing funds in demand deposit or savings accounts, would also likely have a negative impact on overall returns for these portfolios. The potential change in return per $100 million in additional public deposits is estimated to range from a slight positive impact of $280,000 to $750,000 for the Primary Liquidity Portfolio and the LGIP, respectively, to a reduced yield of between $2.53 million and $2.27 million for these portfolios depending on market conditions, the type of deposit vehicle, and whether market rates are paid on the deposits. (Banks may be more willing to accept additional deposits if they were offered at below-market rates.)

Estimated Change in Primary Liquidity Portfolio and LGIP Returns (Per $100 Million of Additional Public Deposits)

Source of Additional Public Deposits	Estimated Change in Return
Primary Liquidity Portfolio	($2,530,000) to $280,000
LGIP	($2,270,000) to $750,000

Source: JLARC staff analysis.

LGIP AAAm Rating Could Be Adversely Impacted if LGIP Funds Were Placed in Deposits

Requiring that LGIP funds be placed in deposits, such as non-negotiable CDs, at unrated community banks could jeopardize the AAAm rating the LGIP currently receives from Standard & Poor's (S&P). (It is estimated that nearly 90 percent of Virginia banks do not obtain a rating from a credit rating agency.) While S&P criteria state that a small portion of portfolio investments may be placed in non-negotiable CDs at unrated banks, there are several differences between Virginia's investment requirements and S&P's criteria for these types of CDs. Because of these differences, investing LGIP funds in non-negotiable CDs at unrated community banks would likely result in S&P downgrading or withdrawing its rating for the LGIP. (AAAm is the top S&P rating for this type of fund.) If the LGIP were to lose its rating, the majority of Virginia localities indicated that they would no longer invest in it.

Due to concerns over the potential loss of the AAAm rating and the fact that there is already a precedent for placing Primary Liquidity Portfolio funds with Virginia banks through the Public Funds CD Program, this report recommends:

- If the General Assembly requires a larger portion of Treasury-managed funds to be placed with banks operating in Virginia, any such requirement should be directed at the Pri-

mary Liquidity Portfolio rather than the Local Government Investment Pool.

ECONOMIC AND REVENUE IMPACTS OF PLACING ADDITIONAL PUBLIC DEPOSITS IN VIRGINIA BANKS DEPEND ON HOW BANKS WOULD USE THE FUNDS

The question of whether it is desirable to require Treasury to place a portion of the Primary Liquidity Portfolio or the LGIP in Virginia banks is a policy decision that depends upon the trade-offs that are acceptable between Treasury's ability to meet the objectives for these portfolios versus the potential for increased economic development and revenue for the Commonwealth. However, the potential economic impacts from placing more public funds in Virginia banks are difficult to predict because the amount of new lending in Virginia that would occur is uncertain. Lending fluctuates primarily as a result of business cycles, not deposit amounts, according to banking and financial experts. Therefore, simply placing additional funds in Virginia banks may not lead to increased lending or the expected economic development and revenue impacts. Many banks also appear to question whether requiring Treasury to place funds in Virginia banks would be an effective economic development tool. In fact, 41 percent of banks responding to a JLARC staff survey reported that providing incentives or grants directly to Virginia businesses would be the best way to accomplish local economic development rather than providing more public funds to banks.

Large Range in Key Variables Affecting Economic Impacts

Because banking and finance experts indicate that it is very difficult to tie investments in negotiable securities to bank lending, economic and revenue impact estimates are based on placing additional public deposits (such as non-negotiable CDs) with Virginia banks. However, a link between deposits and increased lending in Virginia is also not clear. There are four key variables that drive estimated economic impacts of placing additional deposits in Virginia banks: (1) the proportion of deposits that become loans (referred to as loan-to-deposit ratio), (2) the proportion of resulting loans that would be to in-state customers, (3) the proportion of borrowers that would not be able to obtain loans otherwise, and (4) the proportion of loaned money that is spent in state. The table below provides ranges for the variables based on whether the economic impact would be high, medium, or low. Banking and finance experts indicate that, in most cases, the high economic impact assumptions are not likely to occur, at least in today's economic environment.

Key Assumptions Related to Economic Impacts of Placing Additional Public Deposits With Virginia Banks

Assumption	High	Medium	Low
Loan-to-deposit ratio	79%	49%	20%
Proportion of loans made to Virginians	95%	55%	15%
Proportion of borrowers who would not otherwise get loans	50%	30%	10%
Proportion of loan money spent and remaining in-state	80%	50%	20%

Source: JLARC staff analysis.

Positive Economic Development and Revenue Impacts Unlikely to Offset Reduced Returns for Treasury-Managed Portfolios

Three scenarios based on the different sets of economic impact assumptions illustrate the potential economic and revenue impacts of requiring additional Treasury-managed funds to be deposited in Virginia banks. Only the scenario based on the most optimistic (and least probable) economic assumptions would generate enough additional State and local revenue to offset the potential reductions in return for the Primary Liquidity Portfolio and the LGIP, which are estimated to be as high as $2.5 million and $2.3 million per $100 million in additional public deposits, respectively. Therefore, it appears unlikely that the increased revenue resulting from placing additional public funds in Virginia banks would offset the reductions in return for these two portfolios.

Estimated Economic and Revenue Impacts Under the Three Scenarios (Per $100 Million in Additional Public Deposits)

Economic and Revenue Impacts			
	High	**Medium**	**Low**
Economic Output	$42,200,000 to $49,800,000	$5,700,000 to $6,800,000	$84,000 to $99,000
Employment (number of jobs)	157 to 222	21 to 30	0
State Tax Revenues	$1,600,000 to $2,300,000	$215,000 to $310,000	$3,200 to $4,600
Local Tax Revenues	$1,700,000 to $2,200,000	$230,000 to $300,000	$3,400 to $4,300

Source: JLARC staff analysis.

Targeting Community Banks and Placing Lending Requirements on Banks Could Increase Likelihood of Positive Economic Development Impacts

Having a policy to place additional public funds in community banks instead of large banks with a multi-state presence could increase the likelihood of positive economic development impacts (and the resulting increases in revenue) because community banks are more likely to use deposits to provide loans to Virginia customers, particularly to small businesses. However, the products of-

fered by community banks, namely non-negotiable CDs, could also exacerbate portfolio management problems for the Primary Liquidity Portfolio and the LGIP, particularly in the areas of liquidity and return.

Placing lending requirements on Virginia banks that accept additional Treasury-managed funds would also help increase the likelihood of positive economic development impacts. If the State provides additional funds to banks without specific lending requirements, banks could use the funds in any way they choose, which may or may not include lending. To address this concern, several other states have established linked deposit programs that require banks to use public funds received to provide loans to certain types of borrowers. As a result, this report recommends:

- If the General Assembly requires additional public funds to be placed in Virginia banks, it may wish to consider attaching specific lending requirements to these funds. Banks could be required to make certain types of loans, such as small business loans, or could be required to increase their overall lending to in-state individuals and businesses.

Chapter 1

Treasury-managed Funds in Virginia

In Summary

A 2009 Joint Legislative Audit and Review Commission resolution directed staff to study the benefits of placing more public deposits, investments, and other Virginia Treasury-managed funds with banks operating within the Commonwealth versus out-of-state institutions. The Treasury-managed funds addressed by this study are the Primary Liquidity Portfolio, which is related to the State's General Account, and the Local Government Investment Pool (LGIP), which is a Treasury-managed fund comprised largely of local government investments. The FY 2010 average annual balances for the Primary Liquidity Portfolio and the LGIP were $2.5 billion and $3.4 billion, respectively. The *Code of Virginia* and the Treasury Board have established investment guidelines for both funds, and the primary objectives for the funds are, in priority order, safety, liquidity, and return on investment. The guidelines stipulate that the funds primarily be invested in negotiable securities purchased on the open market. However, they also allow a small portion of the funds to be placed in non-negotiable CDs, which are offered by community banks.

At the May 11, 2009, Joint Legislative Audit and Review Commission (JLARC) meeting, the Commission adopted a resolution directing staff to study the benefits of placing more public deposits, investments, and other Virginia Treasury-managed funds with banks operating within the Commonwealth versus out-of-state institutions (Appendix A). The impetus behind this resolution appears to come from the Virginia banking community, which wants the State to place more public funds in local, in-state banks. The study mandate also implies that there has been a shift by the State Treasurer in recent years to direct public funds away from in-state banks and towards out-of-state financial institutions.

In addition to the JLARC study resolution, identical bills were proposed in the 2009 and 2010 General Assembly sessions that would have required Treasury to place a specified portion of an investment fund it manages with banks operating in-state. In particular, House Bill 2583 (2009 Session) and House Bill 246 (2010 Session) required ten percent of Local Government Investment Pool (LGIP) assets to be invested in time, savings, or demand deposits at banks with a presence in Virginia (Appendix B). Although the LGIP is primarily an investment fund for Virginia localities, LGIP investments are managed by the State Treasury. House Bill 246 was continued to the 2011 Session, in part, pending the results of this study.

For this review, JLARC staff interviewed banking and financial experts at the Virginia Department of the Treasury, the Federal Reserve Bank of Richmond, the State Corporation Commission Bureau of Financial Institutions, the Virginia Retirement System, the Virginia Bankers Association, and the Virginia Association of Community Banks. (VRS is not affected by this study. However, staff at VRS were consulted for their investment expertise.) JLARC staff also interviewed staff from the Virginia Association of Counties and the Virginia Municipal League. In addition, JLARC staff conducted surveys of local Virginia treasurers and of banks with a presence in Virginia, and analyzed data available from the Federal Deposit Insurance Corporation (FDIC). With assistance from the College of William and Mary and the University of Virginia, JLARC staff used economic impact models to estimate potential economic development impacts. Staff also contacted treasury departments in other states and national public finance organizations, and conducted a review of the banking and finance literature. Appendixes C and D describe the research activities and methods used for this report in more detail.

DIFFERENCES BETWEEN DEPOSITS AND INVESTMENTS

Types of Deposits

Demand deposits, such as checking accounts, fulfill customers' needs for efficient, safe transactions. Customers can draw upon their funds at any time.

Time deposits are typically payable on a certain date or after a fixed period of time. Depositors may incur penalties for funds withdrawn before this maturity date. A certificate of deposit (CD) is a common type of time deposit.

Savings deposits have no prescribed maturity, but some banks require at least seven days' notice before funds are withdrawn.

The difference between deposits and investments is key to understanding how Treasury manages different types of public funds in Virginia and is at the core of many of the issues addressed by this study. A deposit occurs when funds are placed with a financial institution for credit to a customer's account. There are different types of deposits, including demand deposits, time deposits, and savings deposits. Interest is generally paid on both time and savings deposits whereas banks normally do not pay (or pay only minimal) interest on demand deposits. In addition to demand, time, and savings accounts, banks may offer other deposit accounts which are variations on their standard deposit offerings. All deposits legally become liabilities of a bank because they must be paid back to depositors at some point. Deposits are also insured by the FDIC for up to $250,000 per account type per bank for public deposits. (FDIC insurance amounts for private deposits are $250,000 per depositor per bank.) Deposits are the primary source of funds available to banks for lending.

In contrast to a deposit (in which funds are placed in an account for safekeeping), an investment is an asset that is purchased with the anticipation that it will generate income or appreciate and be sold at a higher price. Financial assets include a variety of different securities such as stocks, government and corporate bonds, and commercial paper. Different types of investments carry different levels of risk, and higher risk investments usually pay a higher rate of return to compensate for the risk. Investment securities are available on the open market where they are bought and sold

through brokers or dealers and are widely accessible to all investors. (This is in contrast to a private transaction or market, which is established directly between participating entities.) A secondary market also exists for many investment securities purchased on the open market, which means that they can be sold prior to maturity.

TREASURY-MANAGED FUNDS ADDRESSED BY THIS STUDY

A primary responsibility of the Department of the Treasury is the investment and management of State and certain local government funds. In 2009, Treasury reported investing over $10 billion in State and local government funds. The four major financial portfolios managed by Treasury include the General Account, the LGIP, the State Non-Arbitrage Program (SNAP), and the Tobacco Indemnification and Community Revitalization Endowment (TICR). The portfolios to which this study most applies are the General Account and the LGIP because they are the largest Treasury-managed investment portfolios, they are managed internally by Treasury staff, and they have fewer investment restrictions than the other Treasury-managed portfolios (both of which have the additional objectives of maintaining the tax-exempt status of the funds in the portfolios).

General Account Primary Liquidity Portfolio

Funds Making Up the General Account

The General Account is made up of general funds and several different types of non-general funds. In FY 2009, three types of State funds accounted for 77 percent of the General Account:

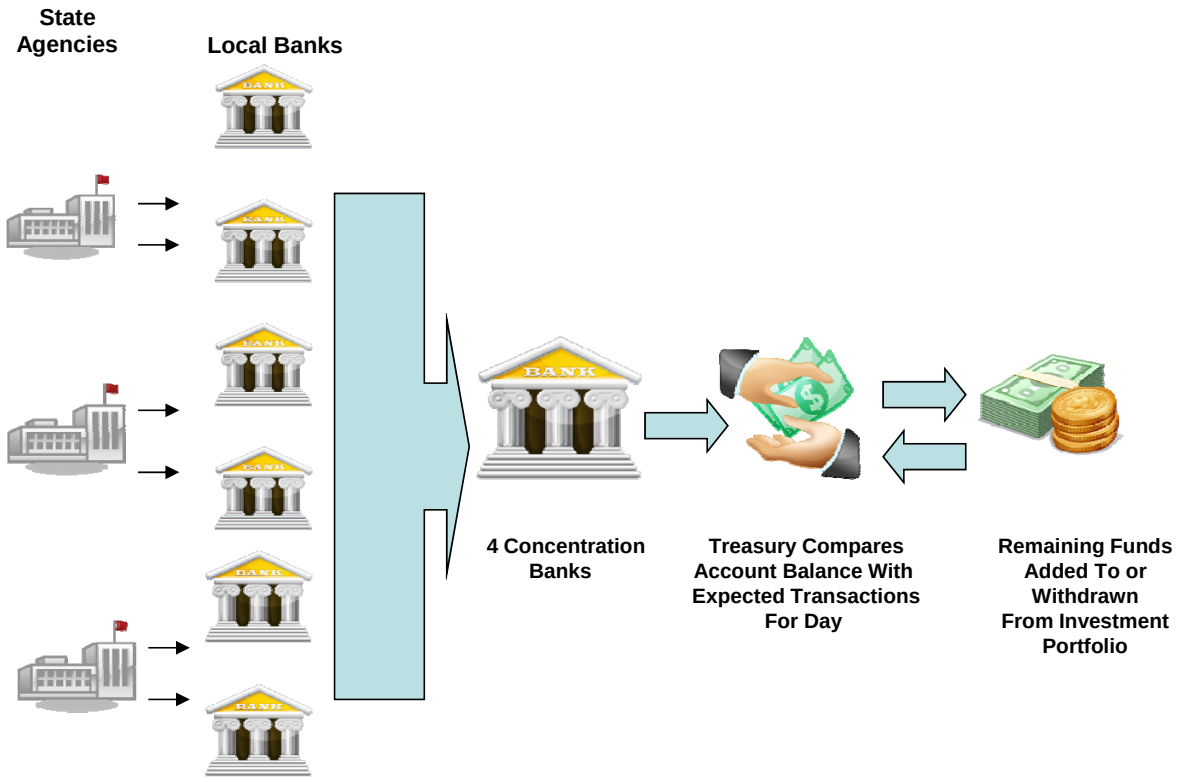
- General Fund money (49 percent),
- Trust and Agency non-general funds (16 percent), and
- Commonwealth Transportation non-general funds (12 percent).

The remaining 23 percent was comprised of ten other types of non-general funds.

Historically, the General Account has been the largest portfolio managed by Treasury and includes the operating funds of Virginia State government. The largest funds in the General Account are the General Fund, the Transportation Trust Fund, the Highway Maintenance Fund, the Lottery Fund, and various insurance funds. Treasury pools the financial assets from these different funds within the General Account for investment purposes in order to structure a more ambitious investment program.

The manner in which funds flow in and out of the General Account investment portfolio impacts Treasury's investment practices for this portfolio (Figure 1). Each day, State agencies deposit fees, tax revenue, and other resources collected for the funds making up the General Account into approximately 75 different accounts at banks located throughout the Commonwealth. To effectively manage these funds, Treasury sweeps the balances from these various accounts each morning and pools the funds into four concentration banks. Treasury staff then compare the General Account balances in the concentration banks with the State's obligations that must be paid that day. Any balances remaining after the day's obligations have been determined are added to the General Account in-

Figure 1: Flow of Funds Into the General Account Investment Portfolio



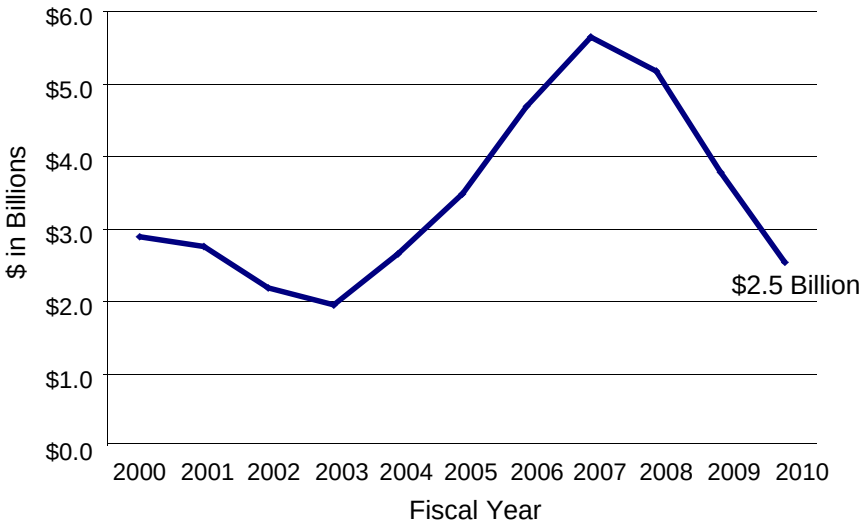
Source: JLARC staff analysis of information provided by the Virginia Department of the Treasury.

vestment portfolio. Similarly, if additional funds are needed to settle the day's transactions, Treasury liquidates a portion of existing investments in the portfolio.

The General Account investment guidelines require that the investment portfolio be divided into two major portfolios: the Primary Liquidity Portfolio and the Extended Duration and Credit Portfolio. Treasury's allocation target for these two portfolios is for 75 percent of General Account assets to be in the Primary Liquidity Portfolio and 25 percent of assets to be in the Extended Duration and Credit Portfolio. The Primary Liquidity Portfolio is internally managed by Treasury staff and is the major source for the daily disbursement requirements and operational needs of the General Account. The Extended Duration and Credit Portfolio is externally managed by investment managers with the explicit objective of generating a higher return over the long term than is earned on assets in the Primary Liquidity Portfolio. Because the Extended Duration and Credit Portfolio is managed to maximize return in comparison to the Primary Liquidity Portfolio, this study focuses on the Primary Liquidity Portfolio portion of the General Account investment portfolio.

Figure 2 shows the size of the Primary Liquidity Portfolio over the past ten years based on average monthly balances. The average annual balances range from a low of $1.9 billion in FY 2003 to a high of $5.7 billion in FY 2007 (although daily balances experienced lower lows and higher highs than shown i Figure 2). Figure 2 also illustrates the overall drop in General Account balances since FY 2007 as a result of reduced State revenue collections in FYs 2008 through 2010.

Figure 2: Primary Liquidity Portfolio Average Annual Balance (FY 2000–FY 2010)



Note: Based on an average of monthly average balances. FY 2010 average through April 2010.

Source: JLARC staff analysis of Virginia Department of the Treasury data.

Local Government Investment Pool (LGIP)

The other major Treasury-managed investment portfolio on which this study focuses is the LGIP. The LGIP was established in 1981 with the purpose of providing a fund that allows governmental entities, particularly local governments, to increase their return on investments with immediate liquidity and minimal credit risk (also known as default risk). The LGIP enables governmental entities to maximize their return by providing a professionally-managed, State-administered fund where monies can be commingled for investment purposes in order to realize the economies of large-scale investing.

In addition to providing a competitive return, the LGIP is also considered highly safe and liquid. The fund is managed to maintain a

Net Asset Value

The Net Asset Value is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of shares outstanding.

stable net asset value of $1.00 per share (similar to a money market fund), and participants can invest or withdraw funds on a daily basis without penalty. The LGIP is also administered in a manner which enables localities to comply with generally accepted accounting principles and the reporting requirements of the Governmental Accounting Standards Board (GASB). In a JLARC staff survey of local treasurers, respondents indicated that the top reasons that they participate in the LGIP are that they can access funds when needed, they feel the fund is safe, and the fund is easy and convenient to use.

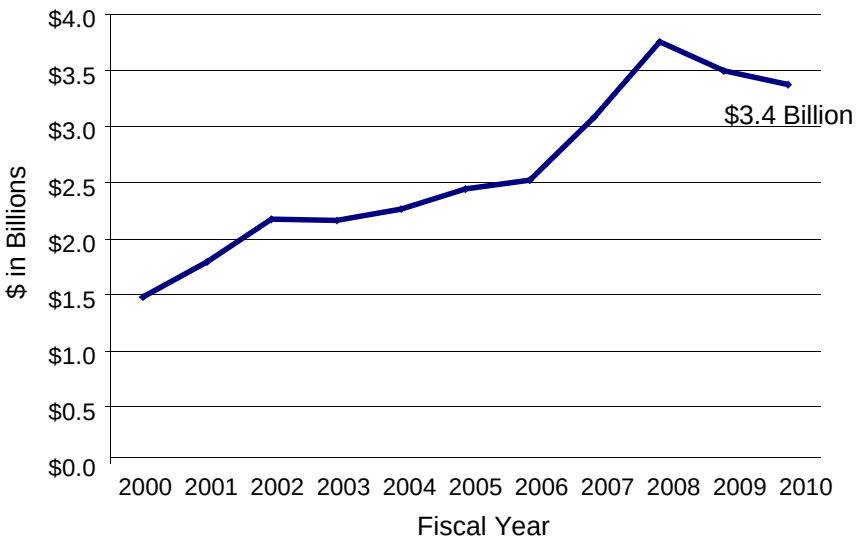
The majority of LGIP participants are local government entities (though any entity handling public funds can participate), and 81 percent of treasurers responding to the JLARC staff survey indicated that they have participated in the LGIP within the last five years or longer. However, because participation is voluntary, participant activity varies from year to year. As of August 20, 2009, there were 376 participants in the pool, including counties, cities, towns, State and local authorities, commissions, community services boards, State and local correctional centers, educational entities, foundations, hospitals, libraries, and other State and local entities. Even though there are several hundred participants in the LGIP at any given time, a large share of the pool's assets is held by relatively few shareholders. For example, between FY 2005 and FY 2009, the top ten accounts in the LGIP held anywhere from 35 percent to 44 percent of the fund's balance. Cities and counties typically comprise some of the largest shareholders, but several State agencies have also been major shareholders at various times. Factors that can influence participation in the LGIP include the availability of funds to invest and the relative attractiveness of the LGIP's safety, liquidity, and return compared to other options that may be available.

Localities Not Participating in the LGIP

Several larger Virginia localities do not utilize the LGIP because they employ their own investment staff, and Treasury indicates that the LGIP is particularly beneficial to smaller localities that do not have their own investment expertise. Other reasons given by localities in a JLARC staff survey for not participating in the LGIP are that they prefer to invest with local banks, and they can get a higher yield by themselves.

Figure 3 shows the average annual balance for the LGIP from FY 2000 through FY 2010. The size of the pool has grown significantly over the past decade from $1.5 billion in FY 2000 to a high of $3.8 billion in FY 2008, which makes the size of the LGIP greater than the Primary Liquidity Portfolio in recent years. The more than 100 percent growth in the value of LGIP between FY 2000 and FY 2010 outpaced inflation, which increased by 27 percent over this timeframe. Therefore, the increase in LGIP balances also appears to reflect increasing participation—both in terms of additional entities investing funds with the LGIP and existing entities investing more funds with the LGIP.

Figure 3: LGIP Average Annual Balance (FY 2000–FY 2010)



Note: FY 2010 average is through April 2010.

Source: JLARC staff analysis of Virginia Department of the Treasury data.

Government Finance Officer's Association (GFOA) Model Investment Statute

The investment policy and objectives for the General Account and LGIP are generally consistent with GFOA's model investment statute, which includes

- a list of authorized investments,
- a prudent investor clause, and
- an emphasis on safety and liquidity as the top investment objectives.

INVESTMENT GOALS AND GUIDELINES FOR THE PRIMARY LIQUIDITY PORTFOLIO AND THE LGIP

The investment goals and guidelines for the Primary Liquidity Portfolio and the LGIP are established by the *Code of Virginia* and the State Treasury Board. The Investment of Public Funds Act (Chapter 45 of the *Code*) sets forth the types of securities in which all public funds in Virginia may be invested, including those managed by Treasury. The *Code* also states that public funds should be invested according to the "prudent person rule," meaning investments should be made with the same care and diligence that a prudent person would use under similar circumstances.

In accordance with the *Code,* the Treasury Board has developed specific goals and guidelines for the investment of Treasury-managed funds which pertain to both the General Account, including the Primary Liquidity Portfolio, and the LGIP. The overall investment policy and objectives established by the Board for these two portfolios are very similar and are provided in Exhibit 1. The investment objectives for both funds, in priority order, are safety, liquidity, and return on investment. The investment guidelines al-

Exhibit 1: Virginia Treasury Board Investment Policy and Objectives for the General Account and LGIP

Treasury Investment Policy

It is the policy of the State Treasurer to invest public funds in a manner which will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the entity and conforming to all statutes governing the investment of public funds. Investments shall be made with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims.

Treasury Objectives

The primary objectives, in priority order, of the State Treasurer's investment activities shall be:

1. **Safety**. Safety of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure preservation of capital in the overall portfolio.

2. **Liquidity.** The investment portfolio will remain sufficiently liquid to enable it to meet all operational requirements which might be reasonably anticipated.

3. **Return on Investment.** The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into account its investment risk constraints and the cash flow characteristics of the portfolio.

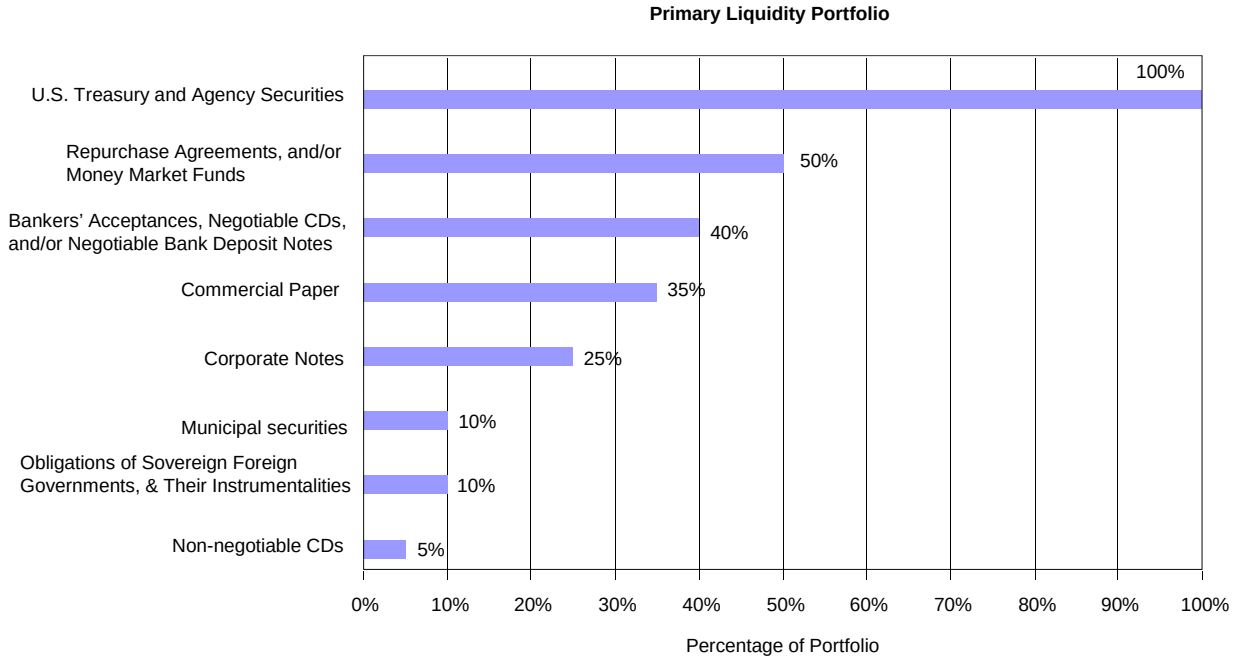
Source: *Code of Virginia,* General Account and LGIP Investment Guidelines.

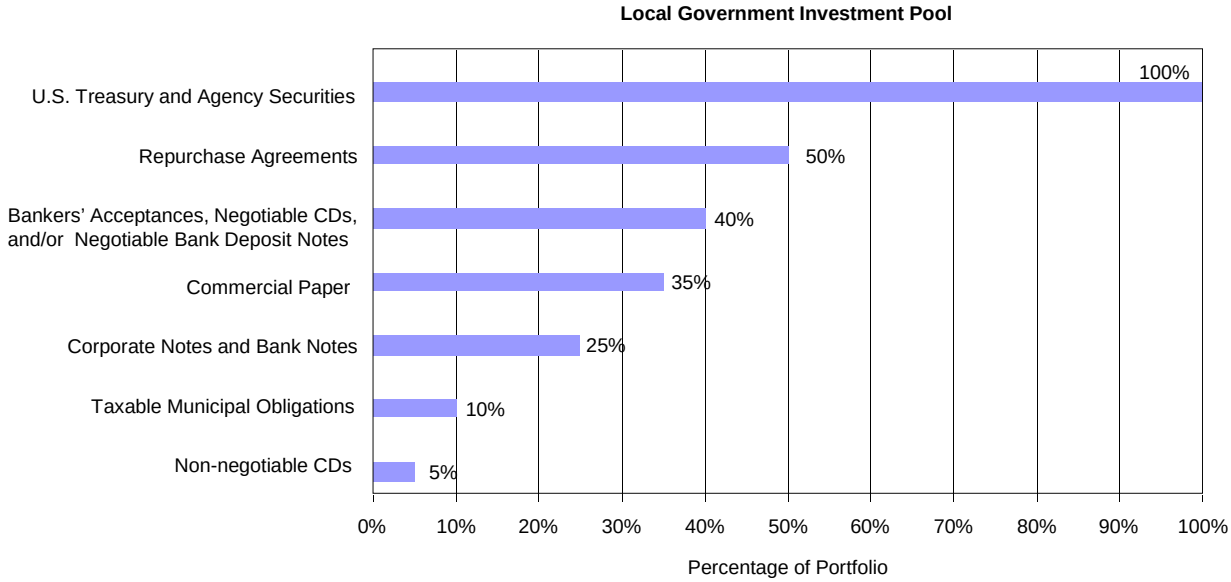
so cover the authorized investments for the portfolios, the minimum credit ratings acceptable for different types of securities, prohibited investments, durational limits for investments, and diversification requirements.

Authorized Investments and Diversification Requirements

The authorized investment and diversification requirements for the Primary Liquidity Portfolio and the LGIP are particularly relevant for this study because they indicate the types of investments that could be made in Virginia banks and the amount that could be placed in any particular investment type or single issuer. Figure 4 shows the current list of authorized investments for each fund and the portion of the portfolio that could be placed with each investment type. The allocation amounts and security types for the two portfolios are very similar, although there are minor exceptions. The requirements conform to the securities that are authorized by the *Code*, although the Treasury Board established the specific maximum allocation amounts for each security type. It should be noted that from time to time Treasury management may further restrict investments in credit-related securities during stressful economic and financial environments.

Figure 4: Maximum Allocation by Security Type for the Primary Liquidity Portfolio and the LGIP





Note: Appendix E includes descriptions of each security type

Source: JLARC staff analysis of General Account Investment Guidelines and LGIP Investment Guidelines.

Credit Securities

Credit securities are financial securities in which an entity, such as a government, bank, or corporation, borrows funds from an investor and agrees to pay the investor back at a later date with interest. Negotiable credit securities have a secondary market.

Rated Banks

Most large banks obtain ratings from one or more credit rating agencies, such as S&P, Moody's, and Fitch. Bank ratings indicate the financial strength of a bank. Most community banks do not obtain ratings from credit rating agencies. On a JLARC staff banking survey, 93 percent of community banks said that they were not rated.

The securities listed in Figure 4 include (1) government-issued securities, (2) repurchase agreements and government money market funds consisting of government-issued securities, and (3) credit securities issued by private entities including banks and corporations. The credit securities which can be issued by banks are most relevant for this study because the funds that banks receive from these securities could later be used for loans. The credit securities in Figure 4 which banks can issue are

- bankers' acceptances,
- negotiable certificates of deposit (CDs),
- negotiable bank deposit notes,
- commercial paper,
- corporate notes, and
- non-negotiable CDs.

Nearly all of the securities purchased by Treasury are negotiable securities that are traded on the open market. Negotiable credit securities are typically only issued by large, rated banks and for large denominations (see sidebar). As will be discussed in Chapter 4, how negotiable a security is becomes important from both a risk and liquidity standpoint. In addition to the negotiable securities permitted by the investment guidelines, Treasury's investment guidelines allow up to five percent of both portfolios to be held in non-negotiable CDs. Non-negotiable CDs do not have a secondary market and are issued primarily by local financial institutions such as community banks.

Figure 4 illustrates the maximum percentages of the Primary Liquidity Portfolio and the LGIP that can be allocated to each security type(s). Financial experts consulted for this study, including staff at Treasury and the Virginia Retirement System (VRS), indicate that investment guidelines typically establish maximum levels that can be invested in security types rather than minimums to allow the fund managers the ability to divest holdings of particular security types if they determine it is prudent to do so given market conditions. As will be discussed in more detail in Chapter 4, the maximum allocation requirements in Figure 4 are based on the risk tolerance and liquidity needs that the Treasury Board has established for the Primary Liquidity Portfolio and the LGIP.

In addition to stating the types of investments and the maximum allocations by type for the Primary Liquidity Portfolio and the LGIP, the investment guidelines for each fund state the maximum percentage of the portfolio that can be placed with a single issuer. With the exception of U.S. government securities, no more than four percent of the value of the Primary Liquidity Portfolio may be

invested in the securities of a single issuer, and no more than five percent of the LGIP may be invested in the securities of a single issuer. (Treasury staff indicated that the LGIP single issuer maximum will be reduced to four percent the next time the LGIP guidelines are updated by the Treasury Board.) While not set forth in the investment guidelines, Treasury staff indicate that a policy has also been established for non-negotiable CDs that a single CD cannot be more than the lesser of $20 million or three percent of the issuing bank's assets. The Primary Liquidity Portfolio and LGIP guidelines do not include any requirements that a portion of either portfolio be placed with Virginia banks.

Chapter 2

The Banking Industry and Public Depositories

In Summary

The majority of banks in Virginia are community banks (defined as banks having assets of less than $10 billion), and 83 percent of these community banks are headquartered in Virginia. There are also 14 large banks (defined as banks having assets of $10 billion or more) with a presence in Virginia. Virginia's banks are generally safe, though large banks tend to be more highly rated than community banks. The Security for Public Deposits Act (SPDA) ensures the safety of public deposits through its collateral requirements, and all State and local public deposits must be placed in a qualified public depository as defined by the SPDA. Any bank with a presence in Virginia (defined as having at least one retail branch in the State) can become a qualified public depository, and 78 percent of Virginia banks have elected to do so. The SPDA definition of banks with a presence in Virginia was used in this study for the purpose of defining banks that are operating in the Commonwealth.

The banking industry is continually evolving, often changing in response to economic conditions. Banks also operate within a complex regulatory environment, which is currently under review at the federal level. In Virginia, the State has adopted laws for the types of banks that are permitted to accept State and local public deposits, and one of these requirements is that banks must have a presence in Virginia. Although there have been recent changes to how banks secure public deposits in Virginia, this has not changed the types of banks that are permitted to accept public deposits.

TYPES OF BANKS IN THE UNITED STATES

There are many different types of banks in the United States with different regulatory structures and varying sizes. The nation's banking industry includes commercial banks, savings banks, savings and loan associations, credit unions, investment banks, Federal Reserve banks, and bankers' banks. This study focuses on commercial banks and savings associations. Commercial banks offer the full range of banking services (including savings accounts, checking accounts, and loans) for individuals, businesses, and governments. Savings associations were first established as community-based institutions to finance mortgages for people to buy homes, and still cater mostly to the savings and lending needs of individuals. As will be discussed later, both commercial banks and savings associations can accept public funds for deposit when certain conditions are met.

Regulatory Agencies for Virginia Banks

National-chartered banks are regulated by the federal Office of the Comptroller of the Currency.

State-chartered banks are regulated by the Virginia State Corporation Commission and one of two federal agencies. Members of the Federal Reserve System are regulated by the Federal Reserve Bank. Non-Federal Reserve members are regulated by the FDIC.

Savings associations have national charters and are regulated by the federal Office of Thrift Supervision.

In addition to varying by type, banks also have different categories of charters. A charter is an agreement that governs the manner in which the bank is regulated and operates. All commercial banks and savings associations are required to obtain a charter to operate. Banks can choose to obtain a state charter from the state in which they are headquartered, or a national charter from the federal government. A bank's charter determines which federal or state agency regulates the bank. In Virginia, 60 percent of banks have a state charter and 40 percent have a national charter.

Another way to categorize banks is by their size and scope. Banks typically fall into one of three major categories:

- Large banks with a national presence and branches located in most states, such as Bank of America;
- Regional banks that operate in one region of the country, such as BB&T (which operates primarily in the southern and southeastern states), and
- Smaller/community banks that are typically located in a single state, but may also have a limited number of branches in neighboring states.

Smaller banks that are located in one state are often referred to as community banks. However, there is not a single definition for a community bank. One definition says that they are generally banks that are locally owned and operated and derive their sources of funds from, and lend money to, the community where they operate. The Virginia Association of Community Banks (VACB) states that a community bank's board of directors and shareholders must live in the State. Others, including staff at the Federal Reserve Bank of Richmond, define community banks as banks with $10 billion or less in total assets. For this study, the team is defining community banks as any bank that has a presence in Virginia and assets of less than $10 billion.

OVERVIEW OF VIRGINIA'S BANKS

Banks in Virginia vary greatly in size and include both large banks and community banks. All localities in the State have at least one bank branch and some localities have more than 100. In general, Virginia's banks have been financially stable, but several banks' financial ratings have declined since 2007.

Most Banks in Virginia Are Community Banks

Ninety percent of Virginia's banks are community banks under the JLARC staff definition.

As of March 31, 2010, the asset size of banks in Virginia ranged from a low of $5.9 million (The Trust Company of Virginia) to a high of $1.5 trillion (Bank of America). Approximately 138 Virginia

banks (91 percent) are community banks; 115 (or 83 percent) of the community banks are headquartered in Virginia and 23 are headquartered in other states, including North Carolina, Maryland, Tennessee, and West Virginia. There are 14 Virginia banks classified as large or regional banks with greater than $10 billion in assets:

- Bank of America
- BB&T
- Capital One Bank (USA), NA
- Capital One, NA
- Citibank, NA
- First Citizens Bank and Trust Co.
- HSBC Bank USA, NA
- Manufacturers and Traders Trust Company
- PNC Bank
- RBC Bank USA
- Regions Bank
- SunTrust Bank
- TD Bank
- Wells Fargo (Wachovia)

Large Banks Dominate Virginia's Overall Market

As of June 30, 2009, seven large national and regional banks comprised almost 75 percent of Virginia's total deposit market share. These banks were: E*Trade Bank; Capital One Bank USA, N.A.; Wachovia; BB&T; Bank of America; Capital One, N.A.; and SunTrust Bank.

Three of these large banks are headquartered in Virginia—Capital One Bank (USA), NA; Capital One, NA; and HSBC Bank USA, NA. HSBC Bank USA is the largest Virginia-headquartered bank. (E*Trade Bank is also headquartered in Virginia, but it is primarily an online bank and has no retail branches in Virginia.)

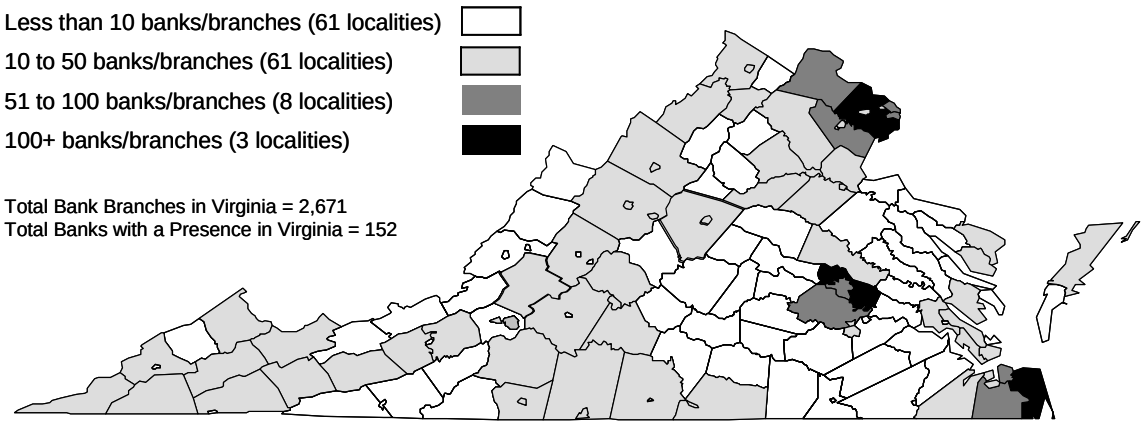
Number of Banks Varies Substantially Throughout the State

According to the Federal Deposit Insurance Corporation (FDIC), there were approximately 152 banks with a presence in Virginia on June 30, 2009 (this includes 138 commercial banks and 14 savings associations). Most of these banks have one or more branches operating in the State (which could include freestanding automated teller machines), bringing the total number of bank *offices* in the State to 2,671. BB&T, for example, has 392 branches located throughout the State.

The number of banks and branches varies substantially throughout the State. Fairfax County has the highest number of banks and branches at 320, followed by Henrico County (102) and Virginia Beach (101). In comparison, four localities (Charles City,

King and Queen, Madison, and Manassas Park City) have only one bank, and 25 localities have fewer than five banks or branches. Figure 5 shows the distribution of banks and branches in localities across the State. The overall number of banks with a presence in Virginia has decreased over the past 10 years by 21 percent—from 193 in 2000 to 152 in 2009. Most of the decrease is due to bank mergers.

Figure 5: Distribution of Banks and Branches in Virginia



Source: JLARC staff analysis of FDIC data (June 30, 2009).

Bank Failures

Seventy-two banks have failed in the United States in 2010 as of May 21, 2010, and 140 failed in 2009. In comparison, 25 banks failed in 2008 and only three failed in 2007. Only two Virginia banks have failed in recent years.

Virginia's Banks Have Generally Been Stable

Virginia's banks have fared better than many of those in other states in recent years. Prior to 2009, there had not been a bank failure in the State for many years, and Virginia has had only two bank failures since the banking crisis that began at the end of 2008. Other states, including Georgia, Florida, and Illinois, have had multiple bank failures over the past two and a half years.

There are several ways to assess the financial stability of banks. One of the most common methods is to use the ratings developed by regulatory agencies and private companies based on detailed assessments of the banks' financial data. These ratings are typically based on an analysis of financial ratios that are available from federal regulatory agencies, such as the FDIC. The most well-known rating is the federal CAMELS rating, which is a rating of the bank's overall condition. CAMELS ratings are disclosed only to the bank's management and are not publicly available. Therefore, the Virginia Department of the Treasury purchases bank rating data from a private firm, which has developed its own version of the CAMELS rating methodology. Similar to the federal CAMELS rating, these ratings look at the financial ratios that have the

CAMELS Rating

The acronym CAMELS refers to the five components of a bank's condition that are assessed by federal regulators: ***C***apital adequacy, ***A***sset quality, ***M***anagement, ***E***arnings, ***L***iquidity, and ***S***ensitivity to market risk.

greatest impact on the quality of an institution, and include a number of areas in which an institution has to perform well in order to be profitable. Treasury uses this data to assess the health of Virginia's banks and determine collateral requirements for its public depositories (discussed in the next section).

Bank Ratings Have Generally Declined in Recent Years, and Large Banks Tend to Be More Highly Rated Than Community Banks. The private rating firm used by Treasury assesses the financial ratios it believes have the greatest impact on the quality of a bank (including those related to profitability) to come up with a rating for each bank. Ratings range from 1 to 300, with 300 being the best rating a bank can receive. Table 1 provides a brief description of the ratings. As of the fourth quarter of 2009, the majority (70 percent) of Virginia banks were rated "average" or above, and the rest (30 percent) were rated "below average" or worse.

Table 1: Summary of IDC Ratings

Rating Category	Description	% of Virginia Banks Receiving Rating as of December 2009
Superior (200-300)	The best banks by all measures.	29
Excellent (165-199)	Strong institutions.	17
Average (125-164)	Banks that meet industry capital standards, but have lower quality loans and narrower profit margins compared to banks rated excellent and superior.	24
Below Average (75-124)	Banks that are under strain.	17
Lowest Ratios (2-74)	Banks with less than the minimum capital required.	10
Rank of One (1)	Banks that have the highest probability of failure.	3

Source: Bank Research Report from the private ratings firm used by the Virginia Department of the Treasury and JLARC staff analysis of rating data for the fourth quarter of 2009.

As a group, large banks tend to have higher ratings than community banks. Sixty-four percent of large banks were rated "superior" or "excellent" in the fourth quarter of 2009, compared to 44 percent of community banks. Only one of the 14 large banks was rated "below average," while one-third of the community banks were rated "below average." All of the banks with a "lowest ratios" or "rank of one" rating were community banks.

Both large and community banks in Virginia have seen their ratings decrease since 2007. Ninety-two percent of large banks in Virginia have seen a decrease in their ratings since 2007, and 69 percent of these bank ratings decreased by more than 10 percent. Four of the large banks have been downgraded from "superior/excellent" to "average" since 2007, and one bank has been downgraded from "average" to "below average." Seventy-six percent (88) of the community banks' ratings have decreased since 2007; 65 percent (76) have decreased by more than ten percent and 46 percent have decreased by 25 percent or more.

VIRGINIA'S SECURITY FOR PUBLIC DEPOSITS ACT

The security of public deposits in Virginia banks is ensured by the Virginia Security for Public Deposits Act (SPDA). The SPDA was enacted in 1973 and creates a single body of law to ensure the safety of public deposits by requiring banks that accept public deposits to secure these deposits by pledging collateral to be held in escrow for the Virginia Treasury Board. The SPDA can be found in Sections 2.2-4400 through 2.2-4411 of the *Code of Virginia*.

Qualified Public Depositories Must Have a Physical Presence in Virginia

Any bank with a presence in Virginia can be a qualified public depository, even those headquartered in other states.

Pursuant to the SPDA, all public deposits in Virginia are required to be placed in banks that are qualified public depositories. To become a qualified public depository, a bank must

- have a physical presence (that is, a retail branch) in Virginia;
- sign a Public Deposit Security Agreement, which is a tri-party agreement with the Treasury Board and an escrow agent of the bank's choosing; and
- place the required collateral with a qualified escrow agent.

A bank does not have to be headquartered in Virginia to be a qualified public depository; it only needs to have a physical presence in Virginia. Therefore, a bank with only one retail branch in Virginia can become a qualified public depository. There are also no performance or capital requirements to be a qualified public depository. Any bank with a presence in Virginia, no matter what its financial condition, may become a qualified public depository, as long as it signs a Public Deposit Security Agreement and pledges the appropriate collateral. There were 120 qualified public depositories in Virginia on March 31, 2010, which represents 78 percent of all of the banks with a presence in the State. The reasons banks choose not to become qualified public depositories can vary. For example, a bank may be an online bank and may not have a retail branch in Virginia (E*Trade Bank, for example), or the bank may not want to pledge the required collateral.

Because the SPDA definition for banks with a presence in Virginia has been used for many years and is widely accepted, this study uses this definition for banks with a presence in Virginia (also referred to as Virginia banks in this report). Treasury, the Virginia Bankers Association, and the Virginia Association of Community Banks agreed that the SPDA definition would be appropriate for this study.

FDIC Insurance

The Emergency Economic Stabilization Act of 2008 signed on October 3, 2008, increased FDIC insurance from $100,000 to $250,000 per depositor per insured bank. For government accounts, the insurance coverage is applied separately to time/savings accounts versus demand deposit accounts. The increase was scheduled to expire on December 31, 2009, but has been extended through December 31, 2013. On January 1, 2014, the standard insurance amount will return to $100,000 (except IRAs and certain other retirement accounts).

Qualified Public Depositories Must Pledge Collateral to Hold Public Deposits

Qualified public depositories are required to pledge collateral so that, if they become insolvent, public deposits remain secure. Collateral is only required for the portion of public funds that are not covered by FDIC insurance. Eligible collateral is defined in the SPDA regulations, and includes securities such as direct obligations of the U.S. government, Virginia state and municipal bonds, U.S. government agency securities, and corporate notes. (Eligible collateral is slightly different for banks that opt out of the collateral pool, which is discussed below.) As of March 31, 2010, most of the collateral pledged by the qualified public depositories was U.S. government agency securities.

Banks in the collateral pool hold approximately 35 percent of total public deposits, and banks that have opted out of the pool hold the remaining 65 percent.

Treasury allows banks to pledge collateral in two different ways: banks can (1) choose to participate in a collateral pool or (2) opt out of the pool. The ability to opt out of the pool is a new option, the procedures for which were adopted by the Treasury Board at its September 16, 2009 meeting. As of March 31, 2010, 66 percent of SPDA banks were participating in the pool and 34 percent had opted out of the pool. Most of the large banks (64 percent) have opted out of the pool. On March 31, 2010, the banks in the collateral pool held 35 percent of total public deposits ($2 billion) and 47 percent of Treasury-managed State public deposits ($71 million). Banks that opted out of the pool held 65 percent of total public deposits ($3.65 billion) and 53 percent of Treasury-managed State deposits ($80.9 million).

Requirements for Banks in the Collateral Pool. The pooled collateral method is based on the concept of mutual responsibility and involves a cross guarantee among all banks holding public deposits. If a qualified public depository defaults, any uncollateralized and uninsured public deposits will be collected by assessments against each participating bank for its proportionate share of the loss based on the ratio that its average public deposits bears to the statewide average. In other words, banks in the pool must help pay for the losses of other banks in the pool that become insolvent.

For banks in the collateral pool, the amount of collateral that is required to be pledged is based on the amount of public deposits the bank holds. The collateral requirements are as follows:

- 50 percent of the first $50 million in public deposits held,
- 75 percent of the public deposits more than $50 million but less than $250 million, and
- 100 percent of the public deposits more than $250 million.

In addition, collateral is based on a bank's financial condition (as determined by the private rating firm discussed above). Banks rated "below average" or lower are required to collateralize 100 percent of their public deposits that are not covered by FDIC insurance, regardless of the deposit amount.

Requirements for Opt-Out Banks. For banks that opt out of the pool, collateral requirements are based solely on the bank's financial condition (as determined by the private rating firm discussed above). Collateral requirements range from 105 to 130 percent of the value of public deposits held, with banks rated "below average" or lower having to pledge 130 percent of their total public deposits.

Chapter 3

Public Deposits and Investments Held by Virginia Banks

In Summary

Virginia banks hold substantial public funds. At the end of the most recent fiscal year, Virginia banks held $5.65 billion in total public deposits and at least $1.63 billion in investments. As required by the *Code of Virginia*, all State and local public funds must be deposited in banks with a presence in Virginia. However, public deposits are generally a very small portion of overall bank deposits (on average, four percent of overall deposits as of March 2010), and a large share of public deposits are concentrated in several large banks. In contrast to deposits, few investments of public funds are in Virginia banks. While previously relatively stable, investments of Treasury-managed funds in Virginia banks have declined in recent years. Changes in the proportion of public investments in Virginia banks appear to be largely a result of changing economic conditions and the creation of the LGIP and other money market funds. The willingness of Virginia banks to accept public funds varies, and Treasury is not always able to place the full amount of funds offered through the Public Funds CD Program with Virginia banks.

Local Government Investments

Local government investments were reported on a JLARC staff survey of local treasurers. Thirty-eight of the 73 local treasurers responding to the survey reported investment data on the survey.

Virginia banks hold a substantial amount of State and local funds. Based on the most recent data available, Virginia banks held $5.65 billion in such public deposits and at least $1.63 billion in State and local investments. The investments include $249.5 million in Primary Liquidity Portfolio and Local Government Investment Pool (LGIP) investments and $1.39 billion in local government investments. (Local government investments reported here are investments made outside the LGIP.)

Just over half (56 percent) of all public deposits were held by 14 large Virginia banks and 44 percent were held by community banks. Of the Primary Liquidity Portfolio and LGIP investments in Virginia banks, the majority (74 percent) were in large banks. Of the local government non-LGIP investments in Virginia banks, nearly all (92 percent) were in large Virginia banks and the remainder were in community banks.

ALL PUBLIC DEPOSITS ARE IN BANKS WITH A PRESENCE IN VIRGINIA

As described in the previous chapter, the *Code of Virginia* requires that all public deposits be placed in banks with a presence in Virginia that are qualified under the Security for Public Deposits Act (SPDA). This includes both State and local government deposits. As of March 31, 2010, there were 120 qualified public depositories in Virginia. The majority (80 percent) were headquartered in Vir-

ginia and the rest (20 percent) were headquartered in other states. Fifty-eight percent of total public deposits and 57 percent of Treasury-managed public deposits were in banks that are headquartered in other states but have a presence in Virginia. These banks include large banks such as Bank of America and BB&T (both headquartered in North Carolina) as well as community banks such as the Bank of Georgetown and United Central Bank (headquartered in Washington, D.C., and Texas, respectively).

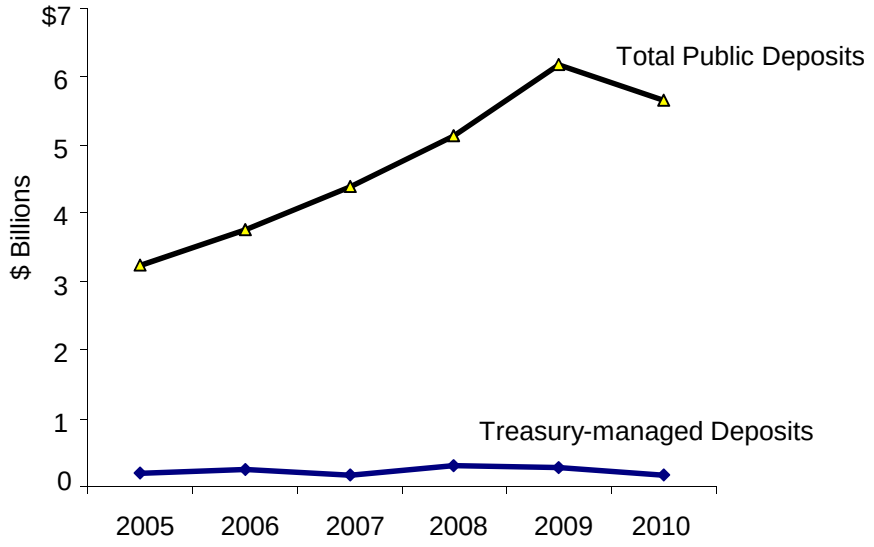
Total Public Deposits in Virginia Banks Have Increased Since 2005

On March 31, 2010, $5.65 billion in State and local funds was on deposit in Virginia banks. The vast majority (97 percent) of these deposits were local government funds and some State funds that are managed by State agencies other than Treasury. The remaining three percent were State deposits that are managed by Treasury. Total public deposits in Virginia banks increased 75 percent in the last five years, from June 30, 2005, to March 31, 2010 (Figure 6). Most of the increase is due to an increase in local government and State agency-managed deposits. Over the same time period, the dollar amount of Treasury-managed deposits in Virginia banks actually decreased 20 percent.

Deposits Managed by State Agencies Other Than Treasury

Treasury staff indicated that many State agencies maintain deposit accounts that they manage themselves. In most cases, these are small accounts.

Figure 6: Total Public Deposits Have Increased Since 2005



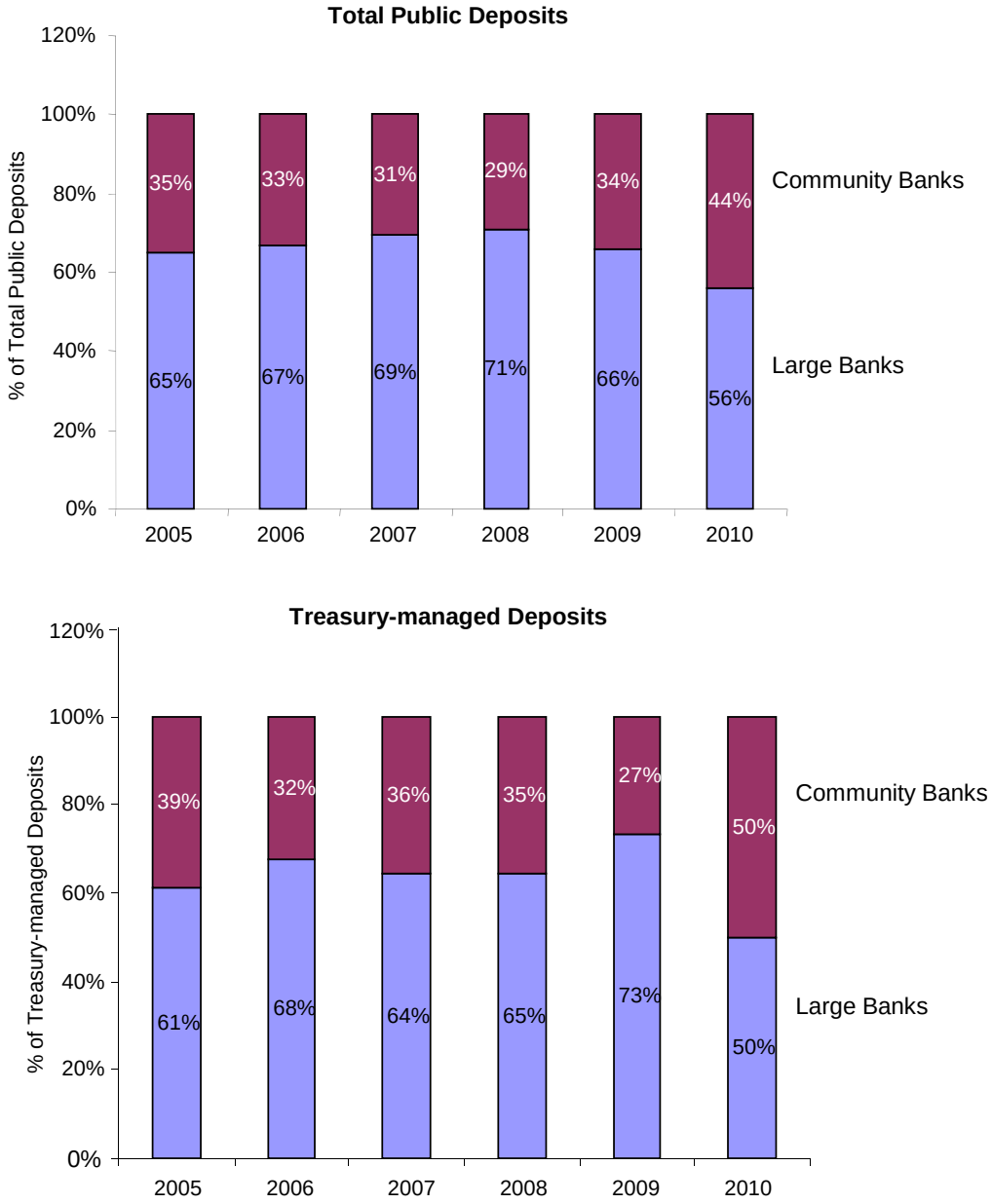
Note: Total public deposits includes Treasury-managed State deposits, State deposits that are managed by agencies, and local government deposits. Deposit amount is for June 30 of each year except for 2010, which is for March 31.

Source: JLARC staff analysis of Virginia Department of the Treasury deposit data.

Most Public Deposits Have Been Held by Several Large Virginia Banks

Since June 30, 2005, most total public deposits have been concentrated in several large Virginia banks. Figure 7 shows that the proportion of total public deposits in large banks and community banks fluctuated slightly from year to year, but roughly one-third

Figure 7: Proportion of Public Funds in Large Banks and Community Banks



Note: Deposit amount is for June 30 of each year except for 2010, which is for March 31.

Source: JLARC staff analysis of Virginia Department of the Treasury deposit data.

of deposits have typically been in community banks and two-thirds have been in large banks. As of March 31, 2010, the proportion of total public deposits in community banks increased substantially because many local governments began placing more of their funds in the Certificate of Deposit Account Registry Service (CDARS) program, which is mainly available in community banks. (CDARS is discussed in more detail in Chapter 4.) This resulted in a more even split of total deposits between community and large banks.

Large banks have also held the majority of Treasury-managed deposits over the past several years. Figure 7 shows that, as with total public deposits, in recent years large banks have held approximately two-thirds of Treasury-managed deposits and community banks have held one-third. However, also similar to total public deposits, the proportion of Treasury-managed public deposits in large and community banks became equal in March 2010. Treasury staff indicated that they pulled about $70 million in compensating balances from a large bank in FY 2010, which reduced the proportion of deposits in the large banks. Although a majority of Treasury-managed deposits have been held by large banks since 2005, the dollar amount of Treasury-managed deposits in large banks decreased 34 percent from June 30, 2009 to March 31, 2010. The dollar amount of Treasury-managed deposits in community banks increased four percent over that same time period.

Compensating Balance

The amount of money a bank requires a customer to maintain in a non-interest bearing account, in exchange for which the bank provides free services.

Although the proportion of public deposits in community banks increased on March 31, 2010, about half of Virginia's total public deposits were concentrated in four large banks, all of which are headquartered in other states (Table 2.)

Table 2: Four Large Banks Held Half of Total Public Deposits on March 31, 2010

Bank	Public Deposits Held	% of Total Public Deposits
Wachovia Bank, N.A.	$917,706,694	16%
BB & T	851,338,481	15
SunTrust Bank	628,928,813	11
Bank of America	484,227,873	9
Total	**$2,882,201,861**	**51%**

Source: JLARC staff analysis of Virginia Department of the Treasury deposit data.

Types of Treasury-managed Deposits in Large and Community Banks

At community banks, 93 percent of Treasury-managed deposits are in time deposits or savings accounts.

At large banks, 100 percent of Treasury-managed deposits are in demand deposit accounts.

Similarly, the majority (69 percent) of Treasury-managed deposits are concentrated in five banks due to necessary banking services, which were competitively bid (Table 3). However, two of these banks are community banks, one of which is headquartered out of state.

Table 3: Five Banks Held the Majority of Treasury-managed Deposits on March 31, 2010

Bank	Treasury-managed Deposits Held	% of Treasury-managed Deposits
Wachovia Bank, N.A.	$53,764,589	35%
Virginia Commerce Bank	20,000,000	13%
Bank of Georgetown	11,000,000	7%
SunTrust Bank	9,789,454	6%
Bank of America	9,608,026	6%
Total	**$104,162,069**	**69%**

Source: JLARC staff analysis of Virginia Department of the Treasury deposit data.

Public Deposits Are Not a Substantial Portion of Most Banks' Overall Deposits

On average, State and local public deposits make up less than four percent of overall bank deposits. Treasury-managed public deposits make up less than one percent of total bank deposits, on average.

Although Virginia's total public deposits are over $5 billion, public deposits are not a substantial portion of most Virginia banks' total deposits. On March 31, 2010, total public deposits, on average, were four percent of overall bank deposits. However, for 15 banks, public deposits represented 10 percent or more of their total deposits, and all of these were community banks. Treasury-managed public deposits comprise an even smaller percentage of overall bank deposits. On average, Treasury-managed public deposits were 0.27 percent of overall bank deposits.

Public deposits comprise a larger portion of community bank deposits than large bank deposits. On average, total public deposits were four percent of community bank deposits and 0.29 percent of large bank deposits. For most of the large banks, total public deposits comprised less than one percent of their total deposits on March 31, 2010. Treasury-managed deposits comprised a miniscule percentage (.002 percent) of the large banks' overall deposits.

FEW INVESTMENTS OF PUBLIC FUNDS ARE MADE IN VIRGINIA BANKS

Although all State and local public deposits are in Virginia banks, few investments of public funds are in Virginia banks. With regard to Treasury-managed investments on December 30, 2009, Virginia banks held $159.4 million in LGIP funds (4.2 percent of total LGIP investments) and $90.1 million in Primary Liquidity Portfolio funds (3.8 percent of Primary Liquidity Portfolio investments). The Primary Liquidity Portfolio investments include $65.1 million in non-negotiable CDs from Virginia banks that were purchased through the Public Funds CD Program, which is discussed later in this chapter. Even though non-negotiable CDs are actually a type

of deposit, not investments, they are included in this section because they are part of Treasury's investment portfolios.

In addition to the Treasury-managed funds, at least $1.39 billion in local government investments outside of the LGIP were in Virginia banks on June 30, 2009. These make up 35 percent of total non-LGIP investments reported by localities. (This investment data was reported by 38 local treasurers that responded to the JLARC staff survey, so the actual amount in Virginia banks is likely to be substantially higher.)

Primary Liquidity Portfolio and LGIP Investments in Virginia Banks Have Fluctuated, but Not as a Result of Changes in Treasury's Investment Policy

2007-2008 Financial Crisis Timeline

February 2007 – Sub prime mortgage crisis begins

September 18, 2007 – Federal Reserve Bank begins series of interest rate cuts

March 16, 2008 – Federal Reserve Bank of New York brokers a deal for JPMorgan Chase to acquire Bear Stearns

September 15, 2008 – Lehman Brothers declares bankruptcy

September 16, 2008 – Federal Reserve organizes bailout for A.I.G.

October 3, 2008 – Congress passes the Troubled Asset Relief Program (TARP)

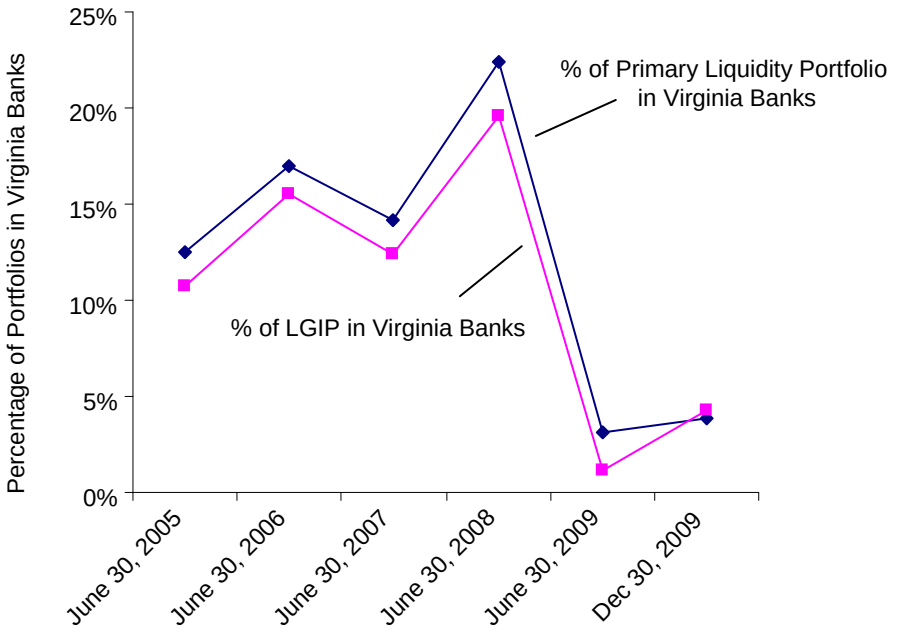
October 3, 2008 – Wachovia sold to Wells Fargo

The percentage of Primary Liquidity Portfolio and LGIP funds in Virginia banks has fluctuated over the past five years, but decreased substantially in FY 2009 and FY 2010 (Figure 8). Based on the June 30 allocation, between FY 2005 and FY 2008 the proportion of the Primary Liquidity Portfolio in Virginia banks ranged from 13 percent to 22 percent of the portfolio's total investments, and the proportion of the LGIP in Virginia banks ranged from 11 percent to 20 percent. However, by June 30, 2009, investments in Virginia banks for both funds dropped below five percent. As will be discussed in more detail in Chapter 4, this was related to Treasury's decision to move funds to low-risk securities as a result of the global banking crisis that peaked in the fall of 2008.

Prior to 2009, most of the Primary Liquidity Portfolio investments in Virginia banks were in the large Virginia banks. However, on June 30, 2009 and December 30, 2009, most of the investments in Virginia banks were in non-negotiable CDs in community banks. Unlike the Primary Liquidity Portfolio, all of the LGIP investments in Virginia banks have been in the large Virginia banks, except for a small portion that was in community banks on June 30, 2005.

Changes in Treasury's Investment Policies Have Not Contributed to Reduction in Funds Placed in Virginia Banks. A concern that led to this study is that there has been a perceived shift by the State Treasurer in recent years to direct investments to out-of-state banks. While the Treasury Board regularly updates its investment guidelines for the Primary Liquidity Portfolio and LGIP to reflect changing economic conditions, there has not been a change in the guidelines for either portfolio explicitly directing additional public funds to be invested out of state. The State Treasurer also indicates that there has not been a change in policy to shift funds out of state.

Figure 8: Percentage of Primary Liquidity Portfolio and LGIP in Virginia Banks Decreased Substantially in 2009



Source: JLARC staff analysis of Virginia Department of the Treasury data.

Most of these changes in the guidelines affecting bank-issued securities involve the type or credit rating of securities in which Treasury is permitted to invest or the maximum amount of the fund that can be placed with a single issuer. These changes would generally affect those banks issuing negotiable securities with a presence in Virginia more so than other banks.

One change to the guidelines that could have had an impact on the portion of investments placed in Virginia banks, but does not appear to have done so in practice, was a decrease in the maximum allocation for non-negotiable CDs from 25 percent to five percent of the value of the fund. This reduction occurred in 2005 for both the Primary Liquidity Portfolio and the LGIP. As indicated previously, non-negotiable CDs are the primary investment instrument offered by Virginia community banks. However, even though the maximum allocation was reduced significantly for both funds, in practice Treasury has not historically placed a large share of either portfolio in non-negotiable CDs. According to Treasury, the historically low allocation of funds to non-negotiable CDs was part of the reason the Treasury Board reduced the maximum allocation, along with changes in Virginia's banking community that led to a greater availability of negotiable CDs from Virginia banks, which better met Treasury's investment needs. As shown in Table 4, the percentage of the Primary Liquidity Portfolio in non-negotiable

Table 4: Percentage of Primary Liquidity Portfolio in Non-Negotiable CDs (FY 2001–FY 2009)

Fiscal Year	Non-Negotiable CDs as % of Portfolio Balance
2001	0.0%
2002	0.0%
2003	2.1%
2004	2.9%
2005	1.7%
2006	1.5%
2007	1.1%
2008	1.6%
2009	3.3%

Source: JLARC staff analysis of Virginia Department of the Treasury data.

CDs has been under five percent since FY 2001. With respect to the LGIP, there have been no LGIP funds placed in non-negotiable CDs since March 2005 due to restrictions related to the fund's AAAm rating. (This will be discussed more fully in Chapter 4.)

Creation of LGIP and Other Money Market Funds Led to Funds Leaving In-State Banks. The action that may have had the greatest impact on funds leaving Virginia banks, particularly community banks, was the creation of the LGIP in 1981 and other money market funds that were created around that time. In a survey of local Virginia treasurers, 81 percent of survey respondents indicated that they have participated in the LGIP within the past five years, and the vast majority (over 90 percent) have had funds invested in the LGIP at all times.

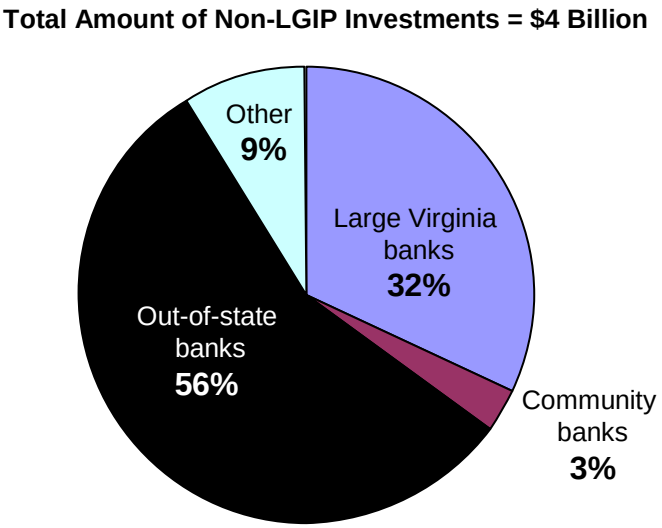
Creation of the LGIP and other money market funds may have had more of an impact on moving additional public funds out of state than any changes to Treasury's investment guidelines or policies.

With regard to where the funds were deposited or invested prior to participation in the LGIP, the most frequently cited location was savings and time deposits (including non-negotiable CDs) at community banks. The second most frequently cited location was savings and time deposits at large Virginia banks. Therefore, because the LGIP is invested in negotiable securities purchased on the open market, it appears that the creation of the LGIP may have had more of an impact on moving additional public funds out of state than any changes to Treasury's investment guidelines or policies. Treasury staff note that money market funds in general became very popular in the late 1970s and early 1980s. Therefore, even if the LGIP had not been created, local governments likely would have invested in other money market funds, which would have led to the same result of funds leaving deposit accounts at Virginia banks.

Few Local Government Non-LGIP Investments Are in Community Banks

Based on data for the past five years reported on the JLARC staff survey of local treasurers, the majority of local government non-LGIP investments are in out-of-state banks. Figure 9 shows non-LGIP investments reported by 38 local treasurers on June 30, 2009. Of the approximately $4 billion in non-LGIP investments reported on the survey, $2.6 billion (65 percent) was in out-of-state or "other" banks. Approximately 35 percent was in Virginia banks, and most of this was in the large Virginia banks. Only three percent of local government non-LGIP investments were made in community banks (and this is a slight increase over the previous four years).

Figure 9: Local Governments Place a Majority of Their Non-LGIP Investments in Out-of-State Banks (as of June 30, 2009)



Source: JLARC staff analysis of the survey of local Virginia treasurers.

BANK WILLINGNESS TO PARTICIPATE IN PUBLIC FUNDS CD PROGRAM DEPENDS ON ECONOMIC CONDITIONS AND OTHER FACTORS

Treasury created the Public Funds CD Program to place State public funds in Virginia banks, primarily community banks. Through this program, the State offers $85 million quarterly in public funds from the Primary Liquidity Portfolio to qualified public depositories to be placed in six-month non-negotiable CDs. As stated earlier, much of the Primary Liquidity Portfolio that is in Virginia banks is part of this program, although it still represents a small portion of overall Primary Liquidity Portfolio investments. On June 30, 2009, the funds in the Public Funds CD Program rep-

resented approximately three percent of the Primary Liquidity Portfolio investments.

Community Bankers Bank

The Community Bankers Bank is a bank that is organized solely to do business with other financial institutions. It is owned exclusively by financial institutions and does not conduct business with the general public.

Overview of Public Funds CD Program

Virginia's Public Funds CD Program is administered through the Community Bankers Bank, although Treasury staff determine the amount of public funds to be offered and the interest rate that the State will accept for the funds. Since April 2009, Treasury has used the London Inter-bank Offer Rate (LIBOR). The maximum amount of public funds CDs a bank may hold at any one time is the lesser of (a) $20 million or (b) three percent of the bank's total assets.

The public funds are offered to Virginia banks on a quarterly basis, and the State has offered $85 million to banks for each of the last seven quarters. Because the funds are placed in six-month CDs, at most $170 million (up to five percent of the portfolio) is placed in CDs at any given time. Treasury has increased the amount of funds offered per quarter twice over the past two years. In May 2008, Treasury increased the amount offered from $50 million to $75 million per quarter, and in November 2008, the amount offered was increased to $85 million per quarter. Since 2001, Treasury has purchased over $1 billion in non-negotiable CDs in total. All of these funds went to community banks, and approximately 97 percent of the funds went to banks that were headquartered in Virginia.

Stand-alone CDs

In addition to Virginia's Public Funds CD Program, Treasury purchases non-negotiable CDs directly from banks. Since 2001, the value of stand-alone CDs was $124.6 million, which represents about 11 percent of the total non-negotiable CDs Treasury purchased from Virginia banks since 2001. The remaining 89 percent was purchased through the Public Funds CD Program.

Bank Acceptance of Public Funds Through Program Has Decreased Since 2009

As shown in Table 5, the amount of public funds accepted by banks through the program has fluctuated since August 2007, but the acceptance rates have been consistently low since 2009. The average acceptance rate between August 2007 and November 2008 was 86 percent, while the average acceptance rate since February 2009 has been only 34 percent.

On the JLARC staff survey of Virginia banks, the main reason the majority of banks (67 percent) indicated they did not accept funds through the Public Funds CD Program in 2009 was that they did not need the additional money at the time. Fifty-eight percent of banks indicated this was the reason they did not accept funds through the program prior to 2009. Financial experts consulted by JLARC staff also indicated that the federal government has made cash available to banks at very low interest rates since the banking crisis, and therefore banks have had little reason to accept additional Virginia public funds, which may be offered at a higher in-

Table 5: Public Funds CD Program Acceptance Rates

Year Offered	Month Offered	Amount Offered	Amount Accepted	Percentage Accepted	# of Banks Accepting
2010	May	$85,000,000	$14,245,000	16.76%	7
2010	February	85,000,000	30,991,000	36.46	9
2009	November	85,000,000	32,845,000	38.64	9
2009	August	85,000,000	25,635,000	30.16	8
2009	May	85,000,000	30,326,000	35.68	6
2009	February	85,000,000	37,837,000	44.51	11
2008	November	85,000,000	85,000,000	100.00	14
2008	August	75,000,000	75,000,000	100.00	16
2008	May	75,000,000	50,475,000	67.30	7
2008	February	50,000,000	50,000,000	100.00	13
2007	November	50,000,000	50,526,000	101.05	9
2007	August	50,000,000	18,190,000	36.38	6
		$810,000,000	**$486,825,000**	**60.10%**	

Note: Although this program began in 2001, the Virginia Department of the Treasury did not have official offer amounts until August 2007. Therefore, JLARC staff were unable to calculate an acceptance rate prior to that time.

Source: JLARC staff analysis of Virginia Department of the Treasury data.

terest rate and have additional requirements. Many banks have also reduced their lending because of the current economic environment (as of the start of 2009), so banks may have no need for additional deposits. However, most financial experts agreed that when the economy begins to rebound, banks will begin accepting more funds from the Public Funds CD Program.

Collateral requirements and the required interest rate are other reasons banks may not accept funds through the program. However, it should be noted that Treasury has placed the full offerings in Virginia banks at various times. With regard to collateral, 36 percent of banks responding to the JLARC staff survey indicated that they did not accept funds in 2009 because they did not want to pledge the collateral, and 26 percent indicated that it was because the State's collateral requirements are too burdensome. Collateral was also cited as a reason banks did not accept funds through the program prior to 2009. While some contacts within the Virginia banking community indicated that banks might not accept public funds because the rate Treasury requires is too high, a minority of banks (approximately 15 percent) responding to the JLARC staff survey of banks indicated that this was the reason.

Chapter 4

Potential Impacts of Requiring Treasury to Place Investments of Public Funds in Virginia Banks

In Summary

To increase the proportion of Primary Liquidity Portfolio or LGIP funds in Virginia banks, Treasury could place additional funds in deposits at Virginia banks, purchase additional negotiable securities from Virginia banks, or do a combination of both. The decision to place funds in deposit products versus negotiable securities would affect the types of banks that could receive the funds. Requiring Treasury to place a specified portion of the Primary Liquidity Portfolio or the LGIP in Virginia banks would likely reduce the safety, liquidity, and return of the portfolios, depending on whether funds are placed in deposit or investment vehicles. Safety would be reduced through a loss of flexibility in Treasury's ability to allocate assets. Liquidity could be reduced, particularly if increased funds were placed in non-negotiable CDs. Similarly, placing additional funds in deposits would likely reduce the rate of return, depending on market conditions. Also, requiring LGIP funds to be deposited in Virginia banks would jeopardize the AAAm rating of the LGIP, which could reduce the viability of the fund.

Treasury staff invest funds across a variety of security types within the Primary Liquidity Portfolio and the Local Government Investment Pool (LGIP) to maximize the objectives of safety, liquidity, and yield. The particular allocation of assets within the Primary Liquidity Portfolio and the LGIP at any given time is largely driven by market conditions and which types of securities allow Treasury staff to best meet the portfolios' investment objectives. Treasury could place additional funds in Virginia banks, but depending on market conditions and whether funds are placed in deposit or investment vehicles, doing so may affect their ability to maximize the portfolios' investment objectives and maintain the AAAm rating currently held by the LGIP. Treasury already has the ability to place funds in deposits or investments at Virginia banks. When it is advantageous from the State's financial perspective to place funds with Virginia banks, Treasury staff indicate that they already do so.

OPTIONS FOR PLACING ADDITIONAL FUNDS IN VIRGINIA BANKS

To increase the proportion of Primary Liquidity Portfolio or LGIP funds in Virginia banks, there are three basic approaches Treasury could take. Treasury could (1) place additional funds in deposits in Virginia banks, (2) purchase additional negotiable securities from Virginia banks, or (3) do a combination of both. The decision to

place additional funds in deposit vehicles versus negotiable securities would affect the types of banks that could receive the funds.

Non-negotiable CDs are offered by both large banks and community banks. Negotiable investment products are usually only offered by large, rated banks.

With regard to the first approach, the most likely type of deposit vehicle in which Treasury would place additional funds is non-negotiable CDs because they are available from most banks and they typically have a higher rate of return than other types of deposits. Treasury could also place funds in other types of deposit accounts, such as demand deposit accounts or savings accounts, at either large or community banks in Virginia.

In the second approach, Treasury could invest additional funds in negotiable securities issued by Virginia banks. With the exception of the non-negotiable CDs purchased by Treasury (largely through the Public Funds CD Program), the securities in which Treasury currently invests are all negotiable securities. Negotiable securities tend to be issued by large, rated banks rather than community banks (which are typically unrated), and approximately 90 percent of respondents to the JLARC staff survey of banks indicated that they did not issue negotiable investment instruments. Based on Treasury's historical investment patterns, the negotiable securities that Treasury would most likely purchase from Virginia banks appear to be negotiable CDs and commercial paper. These were also the types of negotiable securities most often offered by Virginia banks based on the survey (for those banks offering negotiable securities).

Chapter 3 indicated that Treasury has invested up to 20 percent of the Primary Liquidity Portfolio and the LGIP with Virginia banks in recent years. However, several factors may affect Treasury's ability to place a specified portion of either portfolio with Virginia banks. With regard to deposits, banks have not accepted the full amount offered through the Public Funds CD Program in recent years. Even though 79 percent of respondents to the JLARC staff survey of banks said that they were either very likely or somewhat likely to accept additional public funds offered by the State, in reality, just 14 banks of the 120 qualified public depositories participated in the Public Fund CD Program from May 2009 to May 2010. (Based on the survey, banks appear more likely to accept public funds if they were offered at a reduced rate.) Therefore, it is unclear whether Treasury could place a significantly increased amount of funds on deposit with Virginia banks at this time, at least at market rates.

With regard to negotiable investments, a similar concern is whether there would be enough options at Virginia banks to fulfill Treasury's needs at all times. Treasury staff indicate that a large part of their investment decisions involve finding securities that match the amount they need to invest and at the maturities they

require to maintain the weighted average maturity of their portfolios. A limited number of Virginia banks issue negotiable securities, and of those that do, not all of the banks are issuing each security type at every maturity at any given time. Options in Virginia banks are further limited by Treasury's use of a credit analyst, who monitors market conditions and makes risk assessment recommendations as to which banks Treasury staff can invest in and the portion of the portfolio that can be invested in each of those banks.

Weighted Average Maturity

Weighted average maturity measures the sensitivity of fixed-income portfolios to interest rate changes. It is the average time it takes for securities in a portfolio to mature, weighted in proportion to the dollar amount that is invested in the portfolio.

REQUIRING ADDITIONAL FUNDS IN VIRGINIA BANKS NOT INHERENTLY UNSAFE, BUT LIMITING TREASURY'S FLEXIBILITY WOULD AFFECT SAFETY

Maintaining the safety of the State's public funds, both deposits and investments, is one of the primary goals of the Department of the Treasury. In addition, safety is the first investment objective for both the Primary Liquidity Portfolio and the LGIP. The current portfolios are considered very safe, and neither has experienced an average annual loss over the past ten years.

The safety of the LGIP is further evidenced by the fund's AAAm rating from Standard and Poor's (S&P). In 2005, the LGIP first received S&P's Principal Stability Fund Rating (PSFR), also known as a "money-market fund rating." The PSFR is a forward-looking opinion about a fixed-income fund's capacity to maintain stable Net Asset Value (NAV), or principal. S&P indicates that when assigning a principal stability rating to a fund, it focuses primarily on the creditworthiness of the fund's investments and counterparties, its investments' maturity structure, and management's ability and policies to maintain the fund's stable NAV. The top PSFR is AAAm, and the LGIP has continuously maintained this rating since 2005.

Standard & Poor's Principal Stability Fund Ratings (PSFR)

PSFRs range from AAAm (extremely strong capacity to maintain principal stability and to limit exposure to principal losses due to credit risks) to Dm (failure to maintain principal stability resulting in a realized or unrealized loss of principal).

As discussed in Chapter 3, a portion of both the Primary Liquidity Portfolio and the LGIP has been invested in Virginia banks in recent years. In general, deposits and investments in Virginia banks are not riskier than deposits and investments in other banks, particularly if Treasury has the ability to move the funds out of a given bank at any time. However, if Treasury were required to place a portion of either portfolio in Virginia banks, this would limit its flexibility to reallocate funds out of Virginia banks (or bank-issued securities more generally) if needed, and could jeopardize the safety of the portfolios if the Virginia banks holding the investments failed.

Safety Could Be Reduced Through a Loss in Flexibility

The safety of both the Primary Liquidity Portfolio and the LGIP could be affected if Treasury is required to place a portion of either portfolio in Virginia banks. The main effect on safety would result from a loss of flexibility, as such a requirement would limit Treasury's flexibility to move funds in response to changing economic conditions. Table 6 illustrates how Treasury adjusted the allocation of assets in its portfolios over a period of four and a half years. From the end of FY 2005 through the end of FY 2008, before the global banking crisis worsened, bank and corporate credit securities made up a sizable share of both the Primary Liquidity Portfolio and the LGIP—ranging from less than half the portfolio to more than 80 percent of the portfolio in the case of the LGIP. This reflects the fact that, during stable economic times, yields are typically higher from bank and corporate credit securities than government securities, which are generally considered lower risk.

Between June 2008 and June 2009, during the midst of the banking crisis, Treasury shifted nearly all of the assets for both of these funds out of bank and corporate credit securities and into U.S. government and government-related securities to reduce the exposure of the Primary Liquidity Portfolio and LGIP to the losses that

Table 6: Portion of Primary Liquidity Portfolio and LGIP Assets in Credit Securities Issued by Banks or Corporations Has Decreased in Recent Years ($ in Millions)

Asset Class	6/30/2005	6/30/2006	6/30/2007	6/30/2008	6/30/2009	12/30/2009
Primary Liquidity Portfolio						
U.S. Government and Government-Related Securities	$2,490.5	$2,143.0	$2,039.9	$1,519.7	$2,967.0	$2,103.9
Credit Securities Issued by Banks or Corporations	$1,942.3	$3,587.0	$4,227.4	$3,588.2	$102.3	$250.1
Total Primary Liquidity Portfolio *% of Total Primary Liquidity Portfolio in Bank or Corporate Credit Securities*	**$4,432.8** *43.8%*	**$5,730.0** *62.6%*	**$6,267.3** *67.5%*	**$5,107.9** *70.2%*	**$3,069.3** *3.3%*	**$2,354.0** *10.6%*
Local Government Investment Pool (LGIP)						
U.S. Government and Government-Related Securities	*$1,306.8*	*$1,248.4*	*$779.6*	*$1,193.5*	*$4,155.2*	*$2,292.2*
Credit Securities Issued by Banks or Corporations	$1,624.8	$1,885.0	$3,635.1	$3,122.6	$59.5	$1,485.3
Total LGIP *% of Total LGIP in Bank or Corporate Credit Securities*	**$2,931.5** *55.4%*	**$3,133.4** *60.2%*	**$4,414.6** *82.3%*	**$4,316.2** *72.3%*	**$4,214.7** *1.4%*	**$3,777.5** *39.3%*

Note: Non-negotiable CDs, which are largely purchased through the Public Funds CD program, are included in "credit securities issued by banks or corporations." Book value is used for the Primary Liquidity Portfolio and amortized cost is used for the LGIP. At the time this report was prepared, December 2009 data was the most recent data available for FY 2010.

Source: JLARC staff analysis of Virginia Department of the Treasury data.

Categories of Securities

U.S. government and government-related securities include securities that are issued by the U.S. government (such as U.S. Treasury Bonds), securities issued by a U.S. government agency or sponsored entity, money market funds comprised of U.S. government securities, repurchase agreements collateralized by U.S. government securities, and FDIC guaranteed corporate notes. *(continued on next page)*

were occurring in the banking sector. Bank and corporate credit securities went from making up a large share of both portfolios to comprising less than five percent of each portfolio. Treasury was able to make these shifts because its investment guidelines set maximum allocations by security type and do not establish floors on how much must be invested in certain securities. While it is estimated that large U.S. and European banks lost more than $1 trillion from toxic assets, including bad loans, between January 2007 and September 2009, neither the Primary Liquidity Portfolio nor the LGIP sustained a loss from the preceding year for either FY 2008 or FY 2009. More recently, as conditions have stabilized in the banking sector, Treasury has moved increasing shares of both portfolios back into bank and corporate credit securities.

Table 7 shows the portion of assets in the Primary Liquidity Portfolio and the LGIP that were invested in banks with a presence in Virginia between June 2005 and December 2009. (The assets in

Table 7: Portion of Primary Liquidity Portfolio and LGIP Assets in Virginia Banks Has Also Decreased in Recent Years ($ in Millions)

Asset Class	6/30/2005	6/30/2006	6/30/2007	6/30/2008	6/30/2009	12/30/2009
Primary Liquidity Portfolio						
Total Primary Liquidity Portfolio	**$4,432.8**	**$5,730.0**	**$6,267.3**	**$5,107.9**	**$3,069.3**	**$2,354.0**
Assets in Virginia Banks						
Public Funds CD Program	59.1	75.0	55.0	104.3	72.3	65.1
FDIC Guaranteed Corp Notes	0.0	0.0	0.0	0.0	25.0	25.0
Negotiable CDs & Bank Notes	445.0	850.0	698.0	895.0	0.0	0.0
Commercial Paper	50.0	50.0	135.0	145.0	0.0	0.0
Corporate Notes	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**$554.1**	**$975.0**	**$888.0**	**$1,144.3**	**$97.3**	**$90.1**
% of Total Primary Liquidity Portfolio Assets in Virginia Banks	***12.5%***	***17.0%***	***14.2%***	***22.4%***	***3.2%***	***3.8%***
Local Government Investment Pool (LGIP)						
Total LGIP	**$2,931.5**	**$3,133.4**	**$4,414.6**	**$4.316.2**	**$4,214.7**	**$3,777.5**
Assets in Virginia Banks						
Public Funds CD Program	7.9	0.0	0.0	0.0	0.0	0.0
FDIC Guaranteed Corp Notes	0.0	0.0	0.0	0.0	50.0	0.0
Negotiable CDs & Bank Notes	275.0	486.0	450.0	792.0	0.0	115.0
Commercial Paper	15.0	0.0	49.7	53.8	0.0	0.0
Corporate Notes	15.7	0.0	47.0	0.0	0.0	44.4
TOTAL	**$313.5**	**$486.0**	**$546.7**	**$845.8**	**$50.0**	**$159.4**
% of Total LGIP Assets in Virginia Banks	***10.7%***	***15.5%***	***12.4%***	***19.6%***	***1.2%***	***4.2%***

Note: Book value is used for the Primary Liquidity Portfolio and amortized cost is used for the LGIP. At the time this report was prepared, December 2009 was the most recent data available for FY 2010.

Source: JLARC staff analysis of Virginia Department of the Treasury data.

Credit securities issued by banks or corporations include negotiable CDs and bank notes, commercial paper, corporate notes, and non-negotiable CDs. While non-negotiable CDS are not a credit security, but rather a deposit instrument, they are included because they are a bank-related product providing funds to the bank.

Table 7 are largely in the "credit securities issued by banks or corporations" category. FDIC guaranteed corporate notes are also included on Table 7 because, even though they are guaranteed by the FDIC, they are a credit security providing funds to the bank.) Between June 2005 and June 2008, investments in Virginia banks ranged from ten to 22 percent of the total portfolios. However, by June of 2009, less than five percent of either portfolio was invested in Virginia banks. The overall investment patterns in Table 6 show that this does not appear to reflect a decision by Treasury to pull funds out of Virginia banks per se but was rather part of a larger strategy to move funds from bank and corporate credit securities to U.S. government and government-related securities in the midst of the banking crisis. As Treasury has begun moving more funds back to bank and corporate credit securities, the proportion of the Primary Liquidity Portfolio and the LGIP that is in Virginia banks has increased as well. Treasury's actions during the recent banking crisis illustrate the importance of flexibility in maintaining the safety of the portfolios. If there had been a specific requirement to have a portion of the portfolios in Virginia banks, Treasury might not have been able to move funds out of credit and bank securities and the funds could have been at risk if the banks had failed.

Placing Funds on Deposit in Virginia Banks Would Probably Not Decrease Their Safety

If Treasury placed additional funds in deposit vehicles, such as demand deposit or time/savings accounts (including non-negotiable CDs), it is not likely to have a negative effect on the safety of the portfolios. In fact, it might make the portfolios safer because deposits are covered by FDIC insurance (up to $250,000) and the required collateral. As discussed in Chapter 2, Treasury ensures that deposits in banks that opt out of the collateral pool are safe by requiring them to over-collateralize their deposits (from 105 to 130 percent, depending on the bank's rating). The public deposits held by banks that do participate in the collateral pool are also considered safe, even though many of the banks in the pool pledge less than 100 percent collateral, because the total collateral held by the pool is available to cover deposits if needed.

The only way public deposits in Virginia banks would be put at risk is if there were problems related to the collateral. For example, many of the banks in the collateral pool collateralize at 50 to 75 percent of the value of deposits. If there were massive bank failures among these banks, the collateral in the pool might not be enough to cover the failed banks' deposits. This is highly unlikely to occur, particularly because the banks that collateralize less than 100 percent have good ratings, but is not outside the realm of possibility given recent economic conditions. Another way public deposits and the collateral pool could be affected is if banks partici-

Certificate of Deposit Account Registry Service (CDARS)

Banks that participate in the CDARS program can divide up a single large deposit and place the smaller deposits in other CDARS banks in increments that are below the FDIC insurance maximum so that the entire deposit is covered by FDIC insurance. On March 31, 2010, nine percent of total public deposits ($484 million) were in the CDARS program at 27 Virginia banks. These funds were all local and State-agency managed funds; no Treasury-managed funds are in the CDARS program.

pating in the Certificate of Deposit Account Registry Service (CDARS) were not collateralizing their deposits properly (see sidebar). The Treasury Board has raised concerns that banks participating in CDARS might not be collateralizing public deposits during the time period between when they are initially deposited and when they are wired into the CDARS network. Although these are not Treasury-managed funds, the collateral pool could be affected if these funds are not adequately collateralized. In February 2010, the Treasurer sent a memo to all qualified public depositories and local treasurers to remind them to ensure that public deposits are fully collateralized until they are transferred to the CDARS network, but Treasury staff stated there is no way for them to ensure that banks are complying with this requirement. Finally, deposits could be put at risk if banks are under-reporting their public deposits, and therefore not pledging enough collateral to cover their deposits. Although there is no indication that banks are under-reporting deposits, Treasury staff indicated that they have no way to verify whether banks are reporting their total (State and local) public deposits, other than through the annual audit performed by the bank's internal auditor.

Placing Funds in Investments at Virginia Banks Would Not Impact Their Safety

Types of Risk

Credit risk (or default risk) is the risk that a company or individual will be unable to pay the contractual interest or principal on its debt obligations.

Interest rate risk is the risk that an investment's value will change as a result of a change in interest rates.

Liquidity risk is the risk that arises from the difficulty of selling an asset.

The safety of the Primary Liquidity Portfolio and LGIP depends on the safety of the securities in which Treasury invests. Different types of securities carry different levels of risk. In general, securities that are lower risk have lower yields, while securities that are higher risk have higher potential yield, but also have a higher potential for loss. U.S. Treasury bonds are considered risk-free securities because they are backed by the full faith and credit of the U.S. government. In addition, other types of securities associated with the U.S. government, such as U.S. government agency securities, are considered very low risk. Commercial paper, on the other hand, carries credit risk for investors because it is an unsecured debt issued by companies, rather than the U.S. government. Large-dollar negotiable CDs also carry some risk because they are not collateralized above the $250,000 FDIC insurance limit.

Treasury has several requirements and guidelines in place to ensure the safety of its investment portfolios:

- **Authorized investments and credit quality requirements.** The *Code of Virginia* and the Treasury Board's investment guidelines for both the Primary Liquidity Portfolio and the LGIP specify the types of investments in which Treasury may invest, and also require most of the investments (or the banks from which they are purchased) to have very high credit quality. For example, the guidelines require

commercial paper to be rated not lower than P-1 by Moody's Investor Service (indicating the issuer has a "superior ability to repay short-term debt obligations") and A-1 by Standard & Poor's (indicating the "obligor's capacity to meet its financial commitment on the obligation is strong"). The guidelines also prohibit certain investments that are considered high risk.

- **Credit analyst recommendations.** Treasury employs a credit analyst who is responsible for constantly monitoring banks and recommending banks from which Treasury can purchase securities. Treasury's investment staff are not permitted to purchase securities from banks that are not on the credit analyst's approved list. The credit analyst also dictates the maximum percentage amount that Treasury can purchase from each bank on the list.
- **Weighted average maturity (WAM) of funds.** In general, the longer the WAM of a portfolio, the more susceptible the portfolio is to losses from rising interest rates (interest rate risk). Both of Treasury's portfolios are considered to have relatively short WAMs. The LGIP has a maximum 45-day WAM and the Primary Liquidity Portfolio's target WAM is one year. These WAMs mean that many of the securities in the portfolios are short-term securities, limiting their exposure to interest rate risk.
- **Diversification requirements.** Diversification is one way to manage risk in a portfolio. Treasury's investment guidelines attempt to ensure the safety of funds by diversifying investments by security type and by issuer, and stipulating that no more than four percent of the value of the Primary Liquidity Portfolio and five percent of the value of the LGIP shall be invested in the securities of any single issuer (with a few exceptions). These requirements may be restricted further by Treasury management.

If Treasury were able to purchase securities from Virginia banks that met these guidelines and requirements, the safety of the portfolios would not be affected (except for the loss of flexibility discussed earlier). However, there could be situations in which no Virginia banks were offering securities that met Treasury's high credit quality guidelines or other requirements. For example, on May 10, 2010, there were at least seven large Virginia banks whose credit ratings met Treasury's credit quality guidelines, but there were only five Virginia banks on the credit analyst's list of approved banks at that time from which Treasury staff were permitted to purchase securities. Further, only two of these banks typically issue securities on a daily basis, according to Treasury staff. This means that, if there were a requirement to place a portion of funds in Virginia banks, Treasury might be unable to place

the funds in investment securities due to the limited number of approved banks and available securities to meet Treasury's investment needs.

LIQUIDITY COULD BE AFFECTED IF ADDITIONAL FUNDS ARE PLACED IN DEPOSIT VEHICLES

Liquidity

The term liquidity is used in various ways, all relating to the availability of, access to, or convertibility of an asset into cash. An asset, such as a security, is said to be liquid if it can easily be converted to cash on short notice. A bank is said to have liquidity if it can easily meet its needs for cash, either because it has cash on hand or can raise or borrow cash.

Liquidity is the second investment objective for the Primary Liquidity Portfolio and the LGIP. The State requires the Primary Liquidity Portfolio to be highly liquid so that the funds can be available to meet State agency operational costs, pay tax refunds, and meet other State needs. The LGIP also needs to be highly liquid because it is primarily made up of operating funds from local governments, and there are no restrictions on the size or number of transactions LGIP participants can make daily. The daily liquidity needs for the LGIP are greater than that of the Primary Liquidity Portfolio because Treasury cannot anticipate when LGIP participants will make withdrawals and what the amount of those withdrawals will be. The State, on the other hand, can generally anticipate when funds will be needed for its operations, which makes it easier to manage the liquidity needs of the Primary Liquidity Portfolio.

Treasury indicated that both the Primary Liquidity Portfolio and the LGIP have adequate liquidity to meet the needs of their customers. Treasury staff indicated that, under normal market conditions, they could liquidate the Primary Liquidity Portfolio in 48 hours if needed, with the exception of funds in the Public Funds CD program. The liquidity of the LGIP is substantiated by its AAAm rating, which considers a fund's liquidity needs and its ability to quickly sell holdings if the need arises. S&P's criteria state that AAAm-rated funds may have no more than ten percent of assets in illiquid securities to prevent these securities from negatively affecting the fund's value during periods of illiquidity for these securities.

Although both portfolios need to be liquid, they do not have to be fully liquid. There has never been a need to liquidate 100 percent of either portfolio on a single day. The largest withdrawal from the Primary Liquidity Portfolio in recent years occurred over three days in November 2009, and was 48.6 percent of the portfolio's assets. The next highest withdrawal occurred over three days in August 2009 and was 43.7 percent of the portfolio's assets. (While the largest liquidity requirement for the Primary Liquidity Portfolio was slightly less than 50 percent, withdrawals of this amount can require significant portfolio restructuring if not managed properly.) The highest withdrawal from the LGIP occurred over three days in 2007 and was 16.4 percent of the fund's assets. The next highest withdrawal was 12.1 percent of the fund's assets, which

occurred over three days in 2008. Still, the need for liquidity is probably more important for the LGIP because Treasury never knows when participants are going to make withdrawals, and it is technically possible that all participants could decide to withdraw their funds without notice.

Placing Funds in Non-negotiable CDs at Virginia Banks Would Reduce Liquidity

Deposits fall on both ends of the liquidity spectrum. Demand deposit accounts and savings accounts are considered the most liquid asset because a customer can typically withdraw their entire account balance at any time (although some banks require several days' notice to withdraw savings account funds). Non-negotiable CDs, on the other hand, are considered illiquid because they must be held until maturity or the holder will incur a penalty.

Liquidity of Collateral

On March 31, 2010, U.S. Agency securities (primarily Federal National Mortgage Association bonds) represented 88 percent of the market value of collateral pledged to the Treasury Board, municipal securities represented 11 percent of the value, and U.S. Treasury Notes represented two percent of the value. Municipal securities are generally considered less liquid than U.S. Agency securities and Treasury Notes.

If Treasury placed the additional funds in demand deposit accounts or savings accounts, the funds would be very liquid. The only way Treasury could lose liquidity with these types of accounts is if a bank holding these deposits became insolvent. If this occurred, these funds would become temporarily illiquid because, even though the deposits are FDIC insured and collateralized, it would take some time for Treasury to receive the FDIC insurance and liquidate the collateral. The amount of time it would take for Treasury to access its funds depends on the liquidity of the bank's collateral (that is, how long it takes to sell the securities the bank pledged as collateral) and how long it would take the FDIC to provide deposit insurance payouts to the bank's customers (the FDIC's goal is within two business days of the failure of the insured institution). However, unless the bank was holding substantial public funds or several banks holding public funds failed at the same time, the overall liquidity of Treasury's deposits are unlikely to be affected.

If Treasury chose to place the additional funds in non-negotiable CDs in Virginia banks, this money would be illiquid because the CDs must be held until maturity. Treasury staff could stagger the maturity dates to improve liquidity (as they currently do with the Public Funds CD Program) or purchase CDs with shorter terms, although banks responding to the JLARC staff survey of banks indicated they were less willing to accept funds for one- to three-month terms compared to six-month or longer maturities. In addition, Treasury staff consider the non-negotiable CDs it currently purchases through the Public Funds CD program to be illiquid even when the CDs mature because staff believe that the community banks rely on these funds, and it would be problematic for the banks if Treasury were to withdraw the funds.

Placing Funds in Negotiable Investments at Virginia Banks Would Not Impact Liquidity

With regard to investments, liquidity is defined as the degree to which a security can be bought or sold in the market without penalty and without affecting the asset's price. Liquidity can also mean the ability to convert an asset to cash quickly. Liquidity is characterized by a high level of trading activity, and assets that can be easily bought or sold are known as liquid assets.

Difference Between the Primary and Secondary Markets

In the primary market, investors purchase securities directly from issuers (such as corporations issuing shares in an initial public offering) or directly from the federal government in the case of treasuries. In the secondary market, securities are sold by and transferred from one investor to another.

Staff from the Federal Reserve Bank of Richmond stated that U.S. Treasuries are the most liquid form of negotiable security because they have the largest market. Other securities associated with the U.S. government are also very liquid. According to the Government Finance Officers' Association, commercial paper is generally less liquid than U.S. Treasuries or other U.S. government securities, but is still considered a liquid asset. Negotiable CDs are also considered a fairly liquid investment because, even though they have a maturity date, they can be sold before maturity without penalty on the secondary market. Therefore, if Treasury chose to put more funds into credit securities at Virginia banks such as negotiable CDs or commercial paper, the effect on liquidity would likely be negligible.

REQUIRING ADDITIONAL FUNDS TO BE PLACED IN VIRGINIA BANKS COULD HAVE NEGATIVE IMPACT ON RATE OF RETURN

The annual rates of return for the Primary Liquidity Portfolio and LGIP have fluctuated over the past ten years, and as a result of the 2008 banking crisis, have declined substantially in recent years, as shown in Table 8. If a portion of the Primary Liquidity Portfolio or LGIP were required to be invested in Virginia banks, the impact on return would likely vary depending on the type of deposit or investment instrument and on market conditions. As previously mentioned, the most likely financial instrument available at community banks are non-negotiable CDs, and therefore, much of the discussion below focuses on these instruments. Whether placing funds in non-negotiable CDs would increase or decrease the portfolios' yield appears to depend on market conditions. Banks responding to the JLARC staff survey of banks indicated that they would be more likely to accept additional State funds at reduced market rates. However, providing funds to banks at reduced rates would likely result in reduced returns for the Primary Liquidity Portfolio and the LGIP. Investing funds in negotiable securities at Virginia banks is not expected to impact yield, but as previously mentioned, the availability of securities from these banks may be limited.

Table 8: Annual Rates of Return for the Primary Liquidity Portfolio and LGIP Have Fluctuated Over the Last Ten Years

Fiscal Year	Primary Liquidity Portfolio Rate of Return	LGIP Rate of Return
2000	5.82%	5.84%
2001	6.11%	5.93%
2002	4.32%	2.70%
2003	2.88%	1.56%
2004	1.64%	1.13%
2005	2.31%	2.18%
2006	4.13%	4.23%
2007	5.31%	5.34%
2008	4.81%	4.29%
2009	2.80%	1.74%
2010 [a]	*1.04%*	*0.43%*
2010 [b]	*0.95%*	*0.39%*
Average (FY 2000–FY 2010)	**3.73%**	**3.21%**

[a] FY 2010 is through December 2009.
[b] FY 2010 is through March 2010.

Source: Data provided by the Virginia Department of the Treasury.

Impact on Return Based on Rates Reported by Virginia Banks for Non-negotiable CDs Would Depend on Market Conditions

Calculation of the Weighted Return or Reduced Yield

To ensure comparable maturities, the weighted return or reduced yield was calculated using a weighted interest rate for non-negotiable CDs based on the actual distribution of the maturities for the Primary Liquidity Portfolio and the LGIP at the end of each fiscal year.

Based on interest rates reported by Virginia banks for non-negotiable CDs issued to public entities in recent years, requiring a portion of the Primary Liquidity Portfolio or LGIP to be invested in Virginia banks' non-negotiable CDs could result in a positive or negative rate of return, depending on market conditions at the time of investment. Table 9 shows the annual yield for the Primary Liquidity Portfolio and the LGIP between FY 2007 and FY 2010 and the comparative return or reduced yield based on the interest rates reported by Virginia banks for non-negotiable CDs issued to public entities during these years. A limited number of Virginia banks provided JLARC staff with interest rates for non-negotiable CDs issued to Virginia public entities over the last three and a half years. Of the 48 survey respondents, 16 Virginia banks had issued these CDs during this time period, but only six banks provided JLARC staff with interest rate data.

As Table 9 illustrates, the weighted average return of Virginia banks' non-negotiable CDs compared to the Primary Liquidity Portfolio varies from a potential reduced yield of $1.3 million for every $100 million invested (based on FY 2008 rates) to a potential gain of $280,000 for every $100 million invested (based on FY 2010 rates). In comparison, the weighted average return of Virginia banks' non-negotiable CDs compared to the LGIP ranges from a reduced yield of approximately $2.3 million for every $100 million invested (FY 2007) to a positive return of $750,000 (FY 2010). (Ap-

Table 9: Return on Investing Public Funds in Virginia Banks' Non-negotiable CDs Would Depend on Market Conditions

	FY 2007	FY 2008	FY 2009	FY 2010[a]
Primary Liquidity Portfolio				
Actual Yield (%)	5.31%	4.81%	2.80%	1.04%
Weighted Return or Reduced Yield	-1.29%	-1.30%	-0.34%	0.28%
Per $100 Million Invested	($1,290,000)	($1,300,000)	($340,000)	$280,000
Local Government Investment Pool				
Actual Yield (%)	5.34%	4.29%	1.74%	0.43%
Weighted Return or Reduced Yield	-2.27%	-0.79%	0.42%	0.75%
Per $100 Million Invested	($2,270,000)	($790,000)	$420,000	$750,000

[a] FY 2010 is through December 2009 due to the timeframe of interest rates reported by Virginia banks.

Note: JLARC staff calculated the weighted return or reduced yield in comparison to the actual yield of the Primary Liquidity Portfolio and LGIP based on the percent of the total market value by maturity. See Appendix C for further details.

Source: JLARC staff analysis of data provided by the Department of the Treasury and Virginia bank survey respondents.

pendix C includes a detailed description of these weighted average return or reduced yield calculations.)

The wide range of potential gains and reduced yields is in large part a direct outcome of the banking crisis in 2008, which required Treasury to shift a portion of the State's investments in the beginning of FY 2009 from negotiable bank and corporate securities to higher quality (and lower risk and yield) U.S. government securities. Further, because the banking crisis resulted in the federal government reducing interest rates in general, the rate of return on negotiable investments also declined during this period. Consequently, Table 9 shows less of a potential reduction in yield for the Primary Liquidity Portfolio and LGIP in FY 2009, and a potential gain for both funds in FY 2010 due to the lower return on Treasury's investments in federal government agency securities. Banking and finance experts at Treasury and the Virginia Banker's Association indicated that interest rates for non-negotiable CDs tend to be more stable over time than those for negotiable securities. Therefore, it is typical for non-negotiable CDs to perform favorably during times of economic distress but perform less favorably during strong market conditions.

The potential return or reduced yield of investing a portion of the Primary Liquidity Portfolio and LGIP in Virginia banks would also depend on the maturity terms of the non-negotiable CDs offered by Virginia banks, as compared to the average maturity of the Primary Liquidity Portfolio and LGIP. As described previously, the Primary Liquidity Portfolio and LGIP have a weighted average ma-

turity of approximately one year and 45 days, respectively. Thus, if a portion of the Primary Liquidity Portfolio and LGIP were required to be invested in Virginia banks, the potential return or reduced yield would depend on both the interest rates offered by Virginia banks and the specific maturity terms of the non-negotiable CDs. For example, based on an average of the interest rates paid by Virginia bank survey respondents, in recent years the yield of Virginia banks' non-negotiable CDs with a one- to two-month maturity has been lower, on average, than the yield Treasury has received from the Primary Liquidity Portfolio and LGIP. Conversely, the yield of Virginia banks' non-negotiable CDs with a three-month to one-year maturity has been higher, on average, than that earned by Treasury's investment portfolios. It appears that this may be a function of the financial yield curve, which shows that CDs with a shorter maturity typically experience a lower rate of return.

Interest Rates Virginia Banks Indicated They Would Likely Accept Could Result in Reduced Returns

LIBOR Rate

LIBOR is the interest rate that the largest international banks report charging each other for loans. This rate applies to loans borrowed from one day to five years on the short-term interbank market. The LIBOR is officially set once a day by a small group of large banks, and the rate typically changes throughout the day. The rate is the mean of the middle values (interquartile mean) reported by the participating banks.

In addition to asking banks for the rates they paid on non-negotiable CDs issued to public entities, the JLARC staff survey of banks also asked banks at what interest rate and maturity they would accept additional State deposits. Because the rate for Virginia's Public Funds CD Program is based on the LIBOR rate (see sidebar), the survey questions were based on the LIBOR rate as well. Most banks indicated that they were likely to accept public funds at interest rates comparable to or reduced relative to LIBOR rates. However, investing additional public funds in Virginia banks at such rates would likely result in a reduced yield for the Commonwealth.

On the survey, 30 percent of banks indicated that they were very likely to accept public funds at LIBOR rates and 51 percent said that they were somewhat likely to accept funds at these rates. (The remaining 19 percent of banks were not likely or not sure if they would accept additional funds at LIBOR rates.) Of those banks that were somewhat likely, not likely or not sure whether they would accept public funds at LIBOR rates, approximately 80 percent indicated that they would be very or somewhat likely to accept public funds at reduced rates relative to the LIBOR rate. When asked at what rate and term these banks would begin accepting additional public funds, the majority of survey respondents selected six- or 12-month terms at either 25 or 50 basis points (0.25 or 0.50 percent) below LIBOR rates. Among banks that would be likely to accept public funds at reduced rates, the majority indicated that they would not accept public fund CDs with one- or three-month maturity terms. Treasury staff indicated that, for liquidity reasons, they would not likely invest in non-negotiable CDs

with maturities of more than 30 days for the LGIP and six months for the Primary Liquidity Portfolio.

Using a similar weighted return or reduced yield methodology, a comparison of recent historical LIBOR interest rates and the actual yields of the Primary Liquidity Portfolio and LGIP demonstrates that investing public funds at either LIBOR or reduced LIBOR rates (either 25 or 50 basis points below LIBOR) would likely result in negative rates of return for both the Primary Liquidity Portfolio and LGIP. As Table 10 illustrates, the weighted average return using LIBOR rates compared to the Primary Liquidity Portfolio varies from a potential reduced yield of approximately $1.2 million for every $100 million invested (based on FY 2008 rates) to a potential gain of $50,000 for every $100 million invested (based on FY 2007 rates). In comparison, the weighted average return using LIBOR rates compared to the LGIP ranges from a potential reduced yield of approximately $720,000 for every $100 million invested (FY 2008) to a potential positive return of $520,000 (FY

Table 10: Investing Public Funds at Comparable or Reduced Rates Relative to LIBOR Rates Could Also Result in Reduced Yields

	FY 2007	FY 2008	FY 2009	FY 2010[a]
Primary Liquidity Portfolio				
Actual Yield (Primary Liquidity Portfolio)	5.31%	4.81%	2.80%	0.95%
Weighted Return or Reduced Yield (%) Based on:				
LIBOR Rates	0.05%	-0.75%	-0.34%	-0.37%
25 basis points below LIBOR Rates	-0.20%	-1.00%	-0.59%	-0.62%
50 basis points below LIBOR Rates	-0.45%	-1.25%	-0.84%	-0.87%
Per $100 Million Invested Based on:				
LIBOR Rates	$50,000	($750,000)	($340,000)	($370,000)
25 basis points below LIBOR Rates	($200,000)	($1,000,000)	($590,000)	($620,000)
50 basis points below LIBOR Rates	($450,000)	($1,250,000)	($840,000)	($870,000)
Local Government Investment Pool				
Actual Yield (LGIP)	5.34%	4.29%	1.74%	0.39%
Weighted Return or Reduced Yield (%) Based on:				
LIBOR Rates	0.02%	-0.22%	0.52%	0.06%
25 basis points below LIBOR Rates	-0.23%	-0.47%	0.27%	-0.19%
50 basis points below LIBOR Rates	-0.48%	-0.72%	0.02%	-0.44%
Per $100 Million Invested Based on:				
LIBOR Rates	$20,000	($220,000)	$520,000	$60,000
25 basis points below LIBOR Rates	($230,000)	($470,000)	$270,000	($190,000)
50 basis points below LIBOR Rates	($480,000)	($720,000)	$20,000	($440,000)

[a] FY 2010 is through March 2010.

Note: JLARC staff calculated the weighted return or reduced yield in comparison to the actual yield of the Primary Liquidity Portfolio and LGIP based on the percent of the total market value by maturity. See Appendix C for further details.

Source: JLARC staff analysis of Virginia Department of the Treasury data and LIBOR rates.

2009). Table 10 also shows that within each fiscal year, as LIBOR rates are reduced further, the potential reduced yield for the portfolios increases.

Placing Funds in Demand Deposit and Savings Accounts Could Also Result in a Reduced Yield for the Commonwealth

Because House Bill 246 from the 2010 General Assembly Session, which directs a portion of LGIP funds to be placed in in-state banks, specifically mentions savings and demand deposit accounts, JLARC staff also surveyed local government treasurers for their average annual interest rates earned on demand deposit and savings accounts in Virginia banks and compared these rates to the actual yields of the Primary Liquidity Portfolio and LGIP. Since FY 2005, the majority of these interest rates have fallen below the actual yields of the Primary Liquidity Portfolio and LGIP (Table 11). In particular, the average return for the Primary Liquidity Portfolio varies from a potential reduced yield of approximately $2.5 million for every $100 million invested (based on FY 2008 rates) to a potential gain of $70,000 for every $100 million invested (based on FY 2005 rates). Further, the average return for the LGIP ranges from a potential reduced yield of approximately $2 million for every $100 million invested (FY 2008) to a positive return of $200,000 (FY 2005). Most of the potential reductions presented in

Table 11: Investing a Portion of Public Funds in Demand Deposit or Savings Accounts Could Also Result in a Reduced Yield

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Primary Liquidity Portfolio					
Actual Yield (%)	2.31%	4.13%	5.31%	4.81%	2.80%
Potential Return or Reduced Yield					
Demand Deposit Accounts	0.07%	-0.59%	-1.39%	-2.53%	-1.97%
Savings Accounts	0.03%	-0.58%	-1.40%	-2.39%	-1.63%
Per $100 Million Invested					
Demand Deposit Accounts	$70,000	($590,000)	($1,390,000)	($2,530,000)	($1,970,000)
Savings Accounts	$30,000	($580,000)	($1,400,000)	($2,390,000)	($1,630,000)
Local Government Investment Pool					
Actual Yield (%)	2.18%	4.23%	5.34%	4.29%	1.74%
Potential Return or Reduced Yield					
Demand Deposit Accounts	0.20%	-0.69%	-1.42%	-2.01%	-0.91%
Savings Accounts	0.16%	-0.68%	-1.43%	-1.87%	-0.57%
Per $100 Million Invested					
Demand Deposit Accounts	$200,000	($690,000)	($1,420,000)	($2,010,000)	($910,000)
Savings Accounts	$160,000	($680,000)	($1,430,000)	($1,870,000)	($570,000)

Note: JLARC staff did not survey local governments for FY 2010 interest rates because this data was not available at the time the survey was administered. Weights were not applied to these average annual interest rates because demand deposit and savings accounts do not have maturity terms like non-negotiable CDs.

Source: JLARC staff analysis of Virginia Department of the Treasury data and local government treasurers or finance officers.

Table 11 are much greater than those based on interest rates reported by Virginia banks for non-negotiable CDs or rates comparable to or reduced relative to LIBOR rates. Therefore, it appears unlikely that Treasury would place funds in demand deposits or savings accounts if it were required to place funds in Virginia banks.

Return on Investing Additional Public Funds in Virginia Banks' Negotiable Products Would Likely Be Competitive Over Time

Requiring a portion of funds to be invested in negotiable securities at Virginia banks is not expected to greatly affect return.

Requiring a portion of the Primary Liquidity Portfolio or LGIP to be invested in Virginia banks' negotiable securities, such as negotiable CDs or commercial paper, is not expected to greatly affect the return on the portfolios' investment over time. According to banking experts, interest rates on negotiable products such as negotiable CDs and commercial paper are generally very competitive, so it is expected that the Virginia banks would also offer competitive rates. Because data on historical interest rates for negotiable products at Virginia banks is not widely available, JLARC staff were only able to obtain negotiable interest rate data for two Virginia banks for a very short period of time (mid-March through mid-May 2010). Based on these recent rates, both the Primary Liquidity Portfolio and the LGIP would have experienced a reduced yield if public funds were invested in these banks' negotiable products at these more recent rates. However, it is expected that over time, an analysis of return data would show that banks with a presence in Virginia issue negotiable securities at competitive market rates.

LGIP AAAm RATING COULD BE ADVERSELY IMPACTED, WHICH COULD AFFECT ITS VIABILITY

In addition to potentially impacting the safety, liquidity, and return of the LGIP, requiring that funds be placed in Virginia banks, particularly in deposits such as non-negotiable CDs at unrated community banks, could jeopardize the AAAm rating that the LGIP currently receives from S&P. Based on the JLARC staff survey of Virginia banks, approximately 90 percent of banks in Virginia are not rated by a credit rating agency, such as S&P or Moody's. (One reason banks may not seek a rating from a credit rating agency is due to cost. For example, the cost to obtain a rating from S&P could be $70,000 or more.)

S&P's PSFR Criteria and Savings and Demand Accounts

S&P's PSFR criteria do not specifically address savings and demand accounts because no rated funds have approached S&P about placing funds in these types of accounts. However, the same limitations on non-negotiable CDs at non-rated banks would apply to savings and demand deposits at these banks.

S&P's PSFR criteria state that investment funds can purchase a limited amount of non-negotiable CDs, also referred to as collateralized CDs, at non-rated banks. (According to S&P, very few S&P PSFR funds purchase collateralized, non-negotiable CDs at unrated banks.) However, there are several differences between S&P's criteria and Virginia's requirements for these CDs (Table

12). Particularly problematic are the differences regarding collateral. Some of the other differences shown on Table 12, such as the maximum exposure per bank, may not lead to a negative rating action if Treasury managed the LGIP to S&P's criteria— even if Virginia's stated requirements are not as stringent as S&P's criteria. However, the differing approaches to collateral could result in S&P downgrading the LGIP's AAAm rating if the LGIP were to invest in non-negotiable CDs at unrated banks.

One of the key differences between Virginia's collateral requirements and S&P's criteria is the name in which the collateral is held. Section 2.2-4402 of the Virginia Security for Public Deposits Act (SPDA) requires collateral for all public deposits in Virginia to be pledged to the Treasury Board. To minimize the burden of pledging collateral for public deposits, the SPDA also allows banks to pool collateral, though as of 2010, banks may opt out of the pool and face more stringent collateral requirements. In contrast, S&P

Table 12: Comparison of Virginia Requirements and Standard & Poor's Criteria for Investments in Non-negotiable CDs at Unrated Banks

Requirement/Criteria	Virginia's SPDA or Investment Guidelines	Standard & Poor's (S&P)
Name Collateral Held In	Treasury Board	LGIP
Collateralization Amount	50-100% of value of deposits (net of FDIC coverage) for pool participants depending on deposit size and financial strength of bank. 105-130% of value of deposits (net of FDIC coverage) for opt-outs based on financial strength of bank.	105-110% of value of deposits (net of FDIC coverage) depending on maturity of security & collateral pricing frequency
Type of Collateral Accepted	1) U.S Treasuries, U.S. government agency securities, and state and local government bonds and securities; 2) mortgage-backed securities of government sponsored enterprises; 3) obligations of international development banks; 4) corporate notes; 5) Federal Home Loan Bank letters of credit; 6) other securities approved by the Treasury Board	U.S. Treasuries and U.S. government agency securities[a]
Collateral Pricing Frequency	Monthly for pool participants and weekly for opt-outs	At least weekly
Maximum Exposure	5% of portfolio	5% of portfolio *(proposed increase to 10% of portfolio)*
Maximum Exposure Per Bank	Lesser of $20 million or 3% of bank's total assets	0.25% of portfolio

[a] S&P criteria include other securities for collateral, including mortgage-backed securities of government-sponsored enterprises, but at a higher over-collateralization amount.

Source: Standard & Poor's 2007 Fund Ratings Criteria and January 5, 2010, Request for Comment: Principal Stability Fund Rating Criteria. Security for Public Deposits Act (SPDA), Virginia SPDA Regulations, January 26, 2009 State Treasurer's presentation on the SPDA; LGIP Investment Circular June 30, 2009.

criteria indicate that collateral should be pledged directly to the fund receiving the PSFR and the pooling of collateral would be inconsistent with S&P's criteria. The purpose of this criterion is to ensure that the collateral is available for the rated fund's participants in the event that a bank becomes insolvent, and the collateral is not used to reimburse participants in other funds for other insolvencies. Additional differences between Virginia's collateral requirements and S&P's criteria concern the collateral amount, the type of collateral accepted, and the pricing frequency of the collateral. (The pricing frequency is the frequency in which the value of the collateral is re-priced to ensure it is still meeting collateral requirements.)

Based on S&P's criteria, if LGIP funds were placed in non-negotiable CDs, Virginia's collateral requirements would require S&P to take action with regard to the LGIP's rating. S&P could downgrade the rating of the fund or the rating could be withdrawn completely if S&P could not determine what the effect of the differing requirements on the fund would be. While it is possible for Virginia to legislatively establish different collateral requirements for the LGIP and for Treasury to track this collateral separately, Treasury staff indicate this would be very burdensome for both Treasury and Virginia banks. Moreover, it would defeat the SPDA's primary purpose, which is to establish a single body of law for the pledging of collateral for public deposits in Virginia, and it could set a precedent that other entities in Virginia would want to follow.

Those most affected by the potential loss of the LGIP's S&P rating are local governments. In 2005, the Government Accounting Standards Board (GASB) issued Statement No. 40, which requires public entities to disclose the credit rating of their investments on their financial statements. If an investment or pool is unrated, this must also be indicated. (GASB 40 was the impetus behind Treasury obtaining an S&P rating for the LGIP.) Localities reported that if the LGIP lost its rating or its rating were downgraded, they might have to pay a higher interest rate on their bonds, which would effectively cost taxpayers more money. Localities also point to guidance from the Government Finance Officers Association recommending that governments investing in LGIPs should "seek LGIPs with the higher ratings, where possible."

If the LGIP were to lose its rating, many localities indicate that they would no longer invest in it. On the JLARC staff survey of local Virginia treasurers, less than two percent indicated they would continue to invest in the LGIP if it lost its rating or the rating were downgraded. (Sixty-four percent said that they would not continue investing in it and 34 percent were not sure.) Not surprisingly, the majority of local treasurers (60 percent) also did not support re-

quiring a portion of the LGIP to be invested in banks with a presence in Virginia, probably because of the potential impact on its rating. Several treasurers indicated that Virginia banks seeking local government funds should be able to develop relationships with local treasurers on their own, and many treasurers reported already having strong relationships with Virginia banks. On the JLARC staff survey, local treasurers expressed their views on requiring LGIP funds to be placed with Virginia banks:

> An investment is an investment. To introduce an alternative agenda is to undermine the mission of the fund. We will consider withdrawing from the LGIP entirely if the State imposes such a requirement.
>
> * * *
>
> Two primary reasons I invest in LGIP is the AAA rating and liquidity. I fear requiring LGIP to invest in certain investments that may not be of its typical investment quality may jeopardize both the LGIP's rating and liquidity.
>
> * * *
>
> If I want investments in Virginia banks, I'll do it myself.
>
> * * *
>
> I am pleased with the LGIP and see no need to make changes.

Due to concerns over the loss of the AAAm rating from requiring a portion of LGIP funds to be placed in Virginia banks, particularly in the form of deposits, it appears that any policy considered by the General Assembly to place additional Treasury-managed funds in Virginia banks should be targeted at the Primary Liquidity Portfolio. In addition, a precedent for placing Primary Liquidity Portfolio funds with Virginia banks, particularly community banks, has already been established through the Public Funds CD Program. As previously mentioned, the Primary Liquidity Portfolio also has a longer weighted average maturity and the withdrawal needs of the portfolio are more predictable, so the potential loss in liquidity from such a policy could be better managed.

Recommendation (1). If the General Assembly requires a larger portion of Treasury-managed funds to be placed with banks operating in Virginia, any such requirement should be directed at the Primary Liquidity Portfolio rather than the Local Government Investment Pool.

MODIFICATIONS TO THE *CODE OF VIRGINIA* AND TREASURY'S INVESTMENT GUIDELINES WOULD BE NEEDED

If the General Assembly were to require a portion of the Primary Liquidity Portfolio or the LGIP to be deposited or invested with Virginia banks, several changes to the *Code of Virginia* and the funds' investment guidelines would be needed, depending on how a requirement is structured. The most significant *Code* changes relate to the investment policies and objectives for the Primary Liquidity Portfolio and the LGIP. Section 2.2-4514 of the *Investment of Public Funds Act* provides a standard of care for investing public funds, including the Primary Liquidity Portfolio and the LGIP, and requires that any investment of public funds

> …shall be made solely in the interest of citizens of the Commonwealth and with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims.

Because there would likely be times when placing a specified portion of either portfolio in Virginia banks would not be in the interest of the citizens of the Commonwealth and would not adhere to the prudent person rule, an exemption to this rule for such a requirement appears needed.

Section 2.2-1806 of the *Code* pertains to funds in the State Treasury, including the Primary Liquidity Portfolio, and requires that

> The funds shall be invested in such … securities as, in [the judgment of the Governor and the State Treasurer] will be readily convertible into money.

Time deposits, such as non-negotiable CDs, are not considered to be readily convertible into money. If Treasury were required to place additional funds in non-negotiable CDs at Virginia banks, an exemption to this statute also appears needed.

Section 2.2-4601 of the *Code* also explicitly states the investment objectives of the LGIP.

> In selecting among avenues of investment, the highest rate of return, consistent with safety and liquidity, shall be the objective.

Because requiring funds to be placed in Virginia banks could reduce Treasury's ability to meet these objectives, it appears that the General Assembly would need to add economic development as an objective in Section 2.2-4601. While the objectives of safety, liquidi-

ty, and return are not specified in the *Code* for the Primary Liquidity Portfolio, they are included in the investment guidelines that have been adopted by the Treasury Board. Thus, the investment guidelines for both funds would need to be modified as well to include economic development as a goal. However, as previously mentioned, financial experts indicate that it is usually not advisable to use financial investing as a way to achieve public policy goals.

If LGIP funds were required to be placed on deposit with Virginia banks and if there was a desire to maintain the fund's AAAm rating, *Code* changes would also be required related to how collateral is held for this fund. Specifically, the *Code* would need to require collateral for LGIP deposits to be pledged directly to the LGIP. However, as previously mentioned, Treasury indicates that this would be very burdensome and would also defeat the SPDA's primary purpose of establishing a single body of law for pledging collateral for public deposits.

One option that would allow a portion of LGIP funds to be placed in non-negotiable CDs at Virginia banks and would not require changes to the *Code* would be for Treasury to only invest in CDs up to the FDIC insurance limit. Using this approach, there would be no additional collateral requirement for the CDs and, therefore, the collateral requirements in the *Code* would not need to be modified. (According to S&P, some states have used this approach to avoid dealing with collateral issues.) However, several considerations limit the attractiveness of this approach. The current FDIC insurance limit is $250,000 per account type and will be reduced to the standard amount of $100,000 per account type on January 1, 2014. Therefore, to meet a requirement of placing a specified portion of LGIP funds in in-state banks, Treasury would need to purchase many relatively small CDs which could be administratively burdensome. Moreover, due to the $250,000 limit and the fact that there are only 120 qualified public depositories in the state, at most Treasury could place $30 million in non-negotiable CDs (and this is if all qualified depositories accept the full insured amount). When the insurance amount drops back to its standard level of $100,000, Treasury could only place a maximum of $12 million with in-state banks using this approach.

The banking community has suggested using the CDARS program as a way to potentially place more funds in non-negotiable CDs with Virginia banks because the program allows a greater portion of deposits to be covered by FDIC insurance. While this potentially could be an option for the Primary Liquidity Portfolio and the LGIP, Treasury staff indicate that it may not be administratively practical due to the volume of funds it would need to place and the

timing of its daily investment activity. Also, currently only about 40 percent of Virginia banks participate in the CDARS program.

A final consideration related to the investment guidelines is that the Primary Liquidity Portfolio and the LGIP only allow five percent of the portfolios to be placed in non-negotiable CDs. Therefore, if the General Assembly desired a higher portion of these funds to be placed in such deposit instruments, the maximum allocation in the guidelines would need to be increased for these CDs. Even though the five percent maximum is not codified, Treasury staff indicated that the Treasury Board may be unwilling to increase the maximum allocation if it does not feel that it is fiscally prudent to do so. Therefore, if the General Assembly wishes to ensure that a greater amount of Treasury-managed funds be placed in Virginia banks, it may need to place such a requirement in the *Code*. A related concern is that S&P criteria currently state that only up to five percent of AAAm-rated funds may be placed in non-negotiable CDs at unrated banks. Therefore, placing a greater portion of the LGIP in non-negotiable CDs could again jeopardize the fund's AAAm rating. However, S&P is currently seeking comment on a proposal to raise this criteria amount to ten percent of the value of the fund.

Chapter 5

Potential Economic and Revenue Impacts of Placing Additional Public Funds in Virginia Banks

In Summary

Potential additional revenues to State and local governments from economic development probably would not offset the likely reductions in returns if additional Treasury-managed funds were required to be deposited with in-state banks. Key variables affecting the estimates of the economic and revenue impacts are (1) the proportion of public deposits that would become loans; (2) the proportion of the loans that would be made to Virginians; (3) the proportion of the loans that would not be made without additional public funds deposited with in-state banks; and (4) the proportion of the loan funds that would be spent in-state. Three scenarios based on combinations of assumptions about these variables were considered. Only under the most optimistic combination of assumptions (which banking and finance experts said were unrealistically high) did the estimated government revenues from additional economic activity offset potential reduced yields for the Primary Liquidity Portfolio and the Local Government Investment Pool. To increase the likelihood of positive economic development impacts occurring, the General Assembly could focus an investment policy on community banks and require banks to use the funds for specific lending purposes.

As discussed in Chapter 4, Treasury could increase the portions of the Primary Liquidity Portfolio and the Local Government Investment Pool (LGIP) in Virginia banks by either placing additional funds in deposits at these banks or by investing a greater portion of the portfolios in negotiable securities issued by Virginia banks. Banking and finance experts consulted at the Federal Reserve Bank of Richmond and the Virginia Retirement System indicated that it is very difficult to tie investments in negotiable securities with bank lending, and there is typically a closer link between bank deposits and lending. (Although even a specific link between deposits and increased lending is not so clear.)

In addition, community banks typically do not issue negotiable securities, so any economic impact resulting from Treasury purchasing additional negotiable securities at Virginia banks would not involve these community banks. Therefore, the potential economic and revenue impacts discussed in this chapter are based on increasing the portion of the Primary Liquidity Portfolio or the LGIP that is placed in deposits, especially non-negotiable CDs, at Virginia banks.

ASSUMPTIONS FOR ESTIMATING ECONOMIC IMPACTS OF PLACING ADDITIONAL PUBLIC FUNDS IN VIRGINIA BANKS

Four key variables affect the estimation of the economic impacts of placing additional deposits in Virginia banks: (1) the proportion of the deposits that become loans; (2) the proportion of the resulting loans that would be to in-state customers; (3) the proportion of the borrowers that would not be able to obtain loans otherwise (either from other sources or from the same banks themselves); and (4) the proportion of this loaned money that is spent in-state. There is a large amount of uncertainty surrounding each of these variables. However, any estimate that does not take these four variables into account would likely overstate the economic impacts of a policy to place additional public deposits in Virginia banks.

The amount of data available on which to base the four key assumptions varies, and even when data exists, it often leads to a wide range in the assumptions. The ranges discussed below are an attempt to develop reasonable ranges that may occur if Virginia banks were to receive additional public deposits. Appendix D presents a wider range of assumptions, including a maximum upper bound for each of the four assumptions below. However, the maximum upper bound assumptions are highly unrealistic, so more reasonable ranges for the assumptions are needed for generating more believable estimates of the economic impacts.

What Proportion of Additional Public Deposits Become Loans?

The loan-to-deposit ratio is a statistic representing how much of a bank's deposits is lent out. Banks are required by law to hold a specific level of reserves for their deposits. Beyond what is required by law, banks may also choose to hold a greater volume of their funds in reserve, especially during times of economic recession or lower consumer confidence. After banks have determined how much to hold in reserve, a bank can use deposits to make loans or purchase securities—both considered assets on a bank's balance sheet. However, the amount of additional lending that would occur as a result of placing increased public deposits in Virginia banks is highly uncertain. While lending is linked to deposits at the aggregate level, it is more difficult to predict the amount of new lending that would occur as a result of increased public deposits at a more detailed level.

Banking and finance experts consulted at the Federal Reserve Bank of Richmond, Treasury, and several community banks indicate that deposits do not entirely drive bank lending. Rather, lending is primarily a function of whether there are creditworthy borrowers available. Several bankers told JLARC staff that banks in Virginia currently have adequate funds to support their lending.

However, the majority of banks have tightened their lending criteria and are taking on less risky loans as a result of the latest financial crises and in response to bank regulators. Banks also report that the demand for loans from consumers is down. Other factors affecting new lending include how much exposure banks already have to certain types of loans, their current capital ratios, and how else they could use the funds. Therefore, according to expert consensus, simply having additional deposits will not make potential borrowers that previously were unattractive to a bank become more attractive, unless banks have additional incentives such as receiving funds at below-market interest rates. In the words of one community banker, "It's really hard to connect the dots between increased deposits and increased loans."

In the words of one community banker, "It's really hard to connect the dots between increased deposits and increased loans."

Public deposits may also be less likely to lead to increased lending than other sources of funds, such as private deposits. Banking and financial experts indicate that banks typically do not tie specific sources of funds to lending; rather, lending decisions are made more holistically based on a bank's overall balance sheet. However, several features of public deposits potentially make them a less attractive source for increased lending. First, Primary Liquidity Portfolio or LGIP funds would likely be placed in CDs with a maturity of six months or less, whereas most loans are for a longer maturity. Because banks closely monitor the balance of maturities between deposits and lending, they may be less likely to lend out short-term CDs. Public funds are also often considered "hot money" because banks are not sure how long they will have them, which may also make them less attractive for lending. This is in contrast to a bank's core deposits, which are a key source for lending. In addition, public deposits must be collateralized. If banks do not have excess collateral on hand when they accept public deposits, a portion of the deposits will need to be used to purchase collateral and will not be available for lending.

Core Deposits

Core deposits are deposits made by customers in a bank's market area and are considered to be a reliable source of funding for the bank. They are also less vulnerable to changes in interest rates, and are defined as being less than $100,000.

A number of factors could mitigate the issues above, and several banks participating in Treasury's Public Funds CD Program indicated that the majority of those funds were used for lending. If a bank's loans are re-priced frequently (meaning that the interest rate can be renegotiated), banks may be willing to make loans from CDs with a relatively short maturity. Also, if Treasury has a defined program or policy to place a certain portion of the Primary Liquidity Portfolio or LGIP in in-state banks, the banks may be more willing to lend these funds, assuming they have creditworthy customers available, because they will consider the deposits to be more stable.

However, banking and finance experts consulted at the Federal Reserve Bank of Richmond and Treasury indicated that banks will do what is in their best interest with regard to their use of depos-

its. Whether a bank uses increased deposits to make loans or purchase securities depends on what will best meet their return, liquidity, and safety needs at the time. This notion is supported by results from the JLARC staff survey of Virginia banks. When asked how they primarily would use increased public funds, more than half of the survey respondents (54 percent) said it would depend on market conditions at the time.

The recent $700 billion federal Troubled Asset Relief Program (TARP) provides further evidence that increased funding for banks may not lead to increased lending. TARP was enacted by the U.S. Congress and initiated by the U.S. Treasury in October 2008 following the onset of the financial crisis. Although financial experts indicate that the program was put in place to increase the health of the banks and avoid the continuing series of financial institution failures, there was also an expectation that TARP would help increase the availability of credit in the market. However, lending by banks actually decreased in 2009. The TARP program is different than the policies considered for this study in that the federal government gave eligible banks capital in exchange for preferred shares of common stock rather than providing deposits to, or purchasing negotiable securities from, banks. However, it still provides an example that simply directing increased funding to the banking sector does not necessarily result in additional lending if banks do not feel it is in their interest to do so at the time.

In light of the inherent uncertainty over how banks would use additional State deposits, this study assumed loan-to-deposit ratios for additional State deposits ranging from 20 percent to 79 percent. Twenty percent is a conservative estimate of how much new lending would occur due to the concerns raised above. On the other hand, data from the Federal Deposit Insurance Corporation (FDIC) shows that the loan-to-deposit ratio in Virginia banks over the past ten years has averaged 79 percent. This percentage indicates that, on the macro level at least, Virginia banks have lent out most of their deposits over time. Banking experts at the Federal Reserve Bank of Richmond indicated that loan-to-deposit ratios for new public deposits banks receive would likely range between 20 percent to 79 percent, although the true ratio would probably be closer to the lower end of this range.

What Proportion of the Loans Resulting From Additional Public Deposits Would Be Made to Virginians?

The proportion of loans made to Virginians as a result of increased State public deposits appears to depend on the type of bank in which the deposits are made. The assumptions used in this study range from 15 percent to 95 percent of loans that would be made to Virginians (as opposed to individuals or entities located else-

where). Ninety-five percent is reflective of community banks and is the median response to a question on the JLARC staff survey of Virginia banks which asked: "Approximately what percentage of your bank's total loans in calendar year 2009 were to customers (such as businesses, consumers, and farms) in Virginia?"

However, many more community banks responded to the survey than large banks, so the survey result is probably not reflective of large banks. One large regional bank responding to the survey indicated that approximately 15 percent of its total loans as of December 31, 2009, were to customers in Virginia. This bank also suggested that, in the absence of specific lending data, FDIC deposit market share data could be a rough proxy for the portion of a large bank's business (and perhaps loan portfolio) that is in Virginia. Based on a review of the deposit market share data for large Virginia banks, 15 percent was the median. Therefore, 15 percent appears to be a reasonable assumption for a lower bound for the proportion of loans that would be made to Virginians, although for some large banks, the proportion may be even lower. Banking experts also indicated that lending decisions are usually managed centrally for banks, so lending does not necessarily take place where the deposits are made. As a result, in large banks with a multi-state presence, it is likely that a significant portion of any increased lending that could occur from increased public deposits may not occur in Virginia.

What Proportion of These Loans Would Not Be Made Without Additional Public Deposits?

The proportion of loans that would not have been made in the absence of additional public deposits is another assumption affecting the economic impact of requiring additional public funds to be deposited in-state. As previously mentioned, banking experts indicated that a lack of funds is not the primary factor that prevents banks from making loans. Rather, issues such as the individual credit risks of borrowers; the competitiveness of the interest rate compared to other banks; and possibly other regulatory issues, such as maintaining adequate capital levels, could also prevent banks from lending. To the extent that is the case, making more funds available through additional public deposits with Virginia banks would not result in more new loans being made to borrowers who would not have been able to obtain them otherwise. Instead, money from additional public deposits would go to borrowers who would have obtained the funds anyway. In this case, there would be few new loans, resulting in relatively little new spending in the State and relatively small economic impacts.

On the other hand, half of the banks responding to the JLARC staff bank survey indicated that the best way for the State to in-

crease local economic development is to provide more public funds to Virginia community banks (although another 41 percent of banks said that providing incentives or grants directly to Virginia businesses is the best way to stimulate economic development). This finding implies that some banks believe that increasing State deposits with in-state community banks would result in more loans to Virginia businesses and individuals with positive economic impacts.

To reflect these differing viewpoints, assumptions could be made that from 10 to 50 percent of the value of the loans that are made from additional State deposits would not be made otherwise. Assuming that more than half of the loans would not be made otherwise does not seem credible. If the borrowers are sufficiently creditworthy, it seems they could obtain loans even if they must pay a higher rate of interest to other sources. Further, staff from the Federal Reserve Bank of Richmond said that even an assumption of 50 percent could be unrealistically high, although they could not provide an alternative estimate.

What Proportion of Loan Funds Would Be Spent In-State?

The proportion of loan funds that would be spent in-state is the final major assumption affecting the estimates of economic impact. If some loan money is spent out-of-state, it is no longer in the Virginia economy and has no economic impact in Virginia. Telephone, catalog, and internet sales can make purchasing from out-of-state vendors as easy as buying from in-state vendors. This situation applies to both business-to-business sales and business-to-consumer sales. When considering the economic effects of additional money being spent in a given business sector, it is difficult to determine whether most of the money eventually goes to vendors in Virginia or "leaks" to vendors outside of Virginia. However, this assumption can affect the size of the economic effect.

Unfortunately there is little data on the proportion of loans that are spent in-state. Consequently, alternative assumptions can be made that from 20 percent to 80 percent of the loaned funds stays in Virginia. Banking experts at the Federal Reserve Bank of Richmond said that an assumption of 80 percent seems high, but it may depend on the type of bank receiving the deposits. Loans to large corporations from large banks may tend to be spent out of state. However, loans from community banks may be more likely to be spent in-state.

ECONOMIC AND REVENUE IMPACT SCENARIOS

Three illustrative scenarios are presented in this report representing varying degrees of optimism regarding the economic impacts of

a policy requiring additional public funds to be deposited with in-state banks. As shown in Table 13, the "high economic impact" scenario is based on the most optimistic assumptions and would result in the policy having the greatest effects on the Virginia economy and State and local government revenues. The "low economic impact" scenario is based on the least optimistic assumptions and would have the least impact on Virginia's economy and revenues. The "medium economic impact" scenario uses the midpoint between the "low" and "high" ends of the range of assumptions.

Table 13: Specific Assumptions Regarding Economic Impacts Used in Scenarios

Assumption	High	Medium	Low
Loan-to-deposit ratio	79%	49%	20%
Proportion of loans made to Virginians	95%	55%	15%
Proportion of borrowers who would not otherwise get loans	50%	30%	10%
Proportion of loan money spent and remaining in-state	80%	50%	20%

Source: JLARC staff analysis.

Whether a policy of requiring additional Treasury-managed funds to be deposited with in-state banks is worthwhile depends heavily upon whether the most optimistic assumptions in Table 13 occur. If the high impact assumptions are true, then State and local governments may gain slightly more in additional revenues than the Primary Liquidity Portfolio or the LGIP would likely lose in return (as discussed in Chapter 4). But if highly optimistic assumptions affecting the economic impact of this policy are not true, then State and local governments may lose more in diminished returns from their investments than they would gain in additional revenues.

The estimated economic and revenue impacts per $100 million in additional public deposits under the three scenarios are summarized in Table 14 and discussed below. The range is a result of

Table 14: Estimated Economic and Revenue Impacts Under the Three Illustrative Scenarios (Per $100 Million in Additional Public Deposits)

	Economic and Revenue Impacts		
	High	Medium	Low
Economic Output	$42,200,000 to $49,800,000	$5,700,000 to $6,800,000	$84,000 to $99,000
Employment (number of jobs)	157 to 222	21 to 30	0
State Tax Revenues	$1,600,000 to $2,300,000	$215,000 to $310,000	$3,200 to $4,600
Local Tax Revenues	$1,700,000 to $2,200,000	$230,000 to $300,000	$3,400 to $4,300

Source: JLARC staff analysis.

different economic impact variables and models that are used in Appendix D. The impacts on State and local government revenues are also highlighted in the following discussion.

In addition, Table 15 includes estimates from Chapter 4 for how much the returns for the Primary Liquidity Portfolio and the LGIP may change if $100 million in each fund were to be deposited with in-state banks. The changes in returns are presented as ranges to reflect the differing impact on return under varying economic conditions. For example, it can be argued that the return impacts from the last couple of years should be used because the higher returns from earlier years cannot be counted on to return. On the other hand, it can be argued that the past couple of years have been highly atypical because of the banking crisis that started in late 2008, and that the returns of the years before the financial crisis are more likely to occur in the future. The latter argument seems more persuasive. During the financial crisis, unusual economic conditions caused Treasury to give safety a higher priority at the expense of rate of return by investing more in government securities and moving out of bank and corporate credit securities. Consequently, the slight gains shown in Chapter 4 in recent years if money were to be deposited with in-state banks seem unlikely to occur again in future years.

Table 15: Change in Returns (Per $100 Million of Additional Public Deposits)

Source of Additional Public Deposits	Estimated Change in Return
Primary Liquidity Portfolio	($2,530,000) to $280,000
LGIP	($2,270,000) to $750,000

Source: JLARC staff analysis.

Methods for Estimating the Three Types of Economic Impacts

Direct effects are estimated by making additional assumptions and analyzing data directly.

Indirect and induced impacts are estimated using several economic input-output models.

Appendix D provides a more detailed discussion of how the direct, indirect, and induced effects are estimated.

The changes in return in Table 15 also cover the estimated impacts for all types of deposits addressed in Chapter 4 including non-negotiable CDs, savings, and demand deposits. Although Treasury would be most likely to place funds in non-negotiable CDs, recent legislation that has been proposed specifically mentions savings and demand deposits as well.

There are three types of economic impacts which are estimated for each scenario—the direct effect, the indirect effect, and the induced effect. The direct effect is the change in final demand associated with a particular activity. For example, the direct effect of an increase in spending on new homes is to increase new home construction and sales, and therefore to increase output of the residential real estate and construction sectors. The indirect effect is the accumulated increase in intermediate demand for inputs to the sector directly affected. For example, as new home sales increase, increased construction of new homes results in increased pur-

chases of inputs, such as concrete, bricks, mortar, electrical wiring, and architectural design services. These impacts ripple through the economy as these industries purchase inputs to satisfy the increased demand for their products. The induced effect is due to increases in incomes resulting from the direct and indirect effects. For examples, workers who construct new homes receive wages that are used to purchase food, clothing, housing, and other goods and services. The methodology for estimating these three types of impacts varies and is described in more detail in Appendix D.

Scenario 1: High Economic Impact

Using the "high economic impact" assumptions shown in Table 13, the combined direct, indirect, and induced effects on output range from $42.2 to $49.8 million (per $100 million of additional State deposits). (As previously discussed, banking experts at the Federal Reserve Bank of Richmond indicated that the high economic impact assumptions were unlikely to occur.) These estimated levels of output were calculated from amounts reported in Appendix D but adjusted to reflect more realistic assumptions. Amounts in Tables D-9 and D-10 were adjusted by multiplying them by 0.79/0.79 for the same assumed loan-to-deposit ratio; 0.95 for the assumed proportion of loans made to Virginians; 0.5 for the assumed proportion of loans to borrowers who would not otherwise get loans; and 0.8 for the assumed proportion of loan money spent and remaining in Virginia.

Under these assumptions, additional employment would range from 157 to 222 jobs (per $100 million of additional State deposits). The additional State government revenues could range from $1.6 million to $2.3 million. Additional statewide local government revenues are estimated to range from $1.7 million to $2.2 million, which would average about $13,400 to $16,300 for every city and county in Virginia. Total (State and local) additional revenue is estimated to range from $3.3 million to $4.5 million.

Estimated Net Effects on State and Local Government. Under this scenario, the State and local governments could gain enough additional revenue in total to offset the potential reduced yield in the investment portfolios. For every $100 million from the Primary Liquidity Portfolio that is deposited with in-state banks, the change in the portfolio's returns could range from a reduced yield of about $2.53 million to a gain of $280,000. The reduced yield is more likely to occur in future years than the slight gain, because the comparative gain occurred during the financial crisis when the Primary Liquidity Portfolio and the LGIP made safety a higher priority by moving funds out of bank and corporate credit securities and into government money market funds and agency securities. As a result of this unusual move, the rates of return of these two funds

were unusually low during recent years. Given the assumptions in this scenario, the State could gain $1.6 million to $2.3 million in additional revenues, and local governments could gain $1.7 million to $2.2 million in additional revenues. In this situation, the State could have a net loss, but the local governments would have a net gain, particularly because local governments would not ultimately need to subtract the Primary Liquidity Portfolio's reduced yield from their additional revenues.

Likewise, for every $100 million from the LGIP that would be deposited with in-state banks, changes to the LGIP returns would range from a reduced yield of about $2.27 million to a gain of $0.75 million. Statewide, local governments could gain $1.7 to $2.2 million in local revenues. On average, local governments could have a slight net gain, but there is also a possibility that they could experience a net loss. At the same time, State government for the most part would not have to absorb the majority of the potential reduced yield in the LGIP's returns, so it would be able to keep much of its gain in additional revenue of $1.6 million to $2.3 million.

If Treasury were to deposit equal amounts from the Primary Liquidity Portfolio and the LGIP with in-state banks (for instance, $100 million from each), it is possible that the State and local governments could have slight net gains, but it is also possible that they could experience a net loss. Yet it appears that under this scenario the gains may be slightly larger than the reduced yields. The State could gain about $3.2 to $4.6 million in additional revenues, while the Primary Liquidity Portfolio could gain up to $280,000 or lose up to $2.53 million in returns. Local governments could gain about $3.4 million to $4.4 million in additional revenues, while through the LGIP they could gain up to $750,000 or lose up to about $2.27 million in returns.

Scenario 2: Low Economic Impact

Two of the "low economic impact" assumptions tend to come more from the large banks in Virginia (rather than the community banks). If the State were to make more additional deposits in the 14 large banks in Virginia rather than in community banks, the lower end of the range of assumptions regarding the percentage of loans made to Virginians and the proportion of loan money that is spent in Virginia would be more likely.

Given the "low economic impact" assumptions shown in Table 13, additional output would range from about $84,000 to $99,000, the additional jobs would be close to zero, additional State government revenues would range from about $3,200 to $4,600, and additional local government revenues would range from about $3,400 to $4,300.

Estimated Net Effects on State and Local Government. Under the assumptions in this scenario, the State and local governments would likely not gain nearly as much in additional revenues as their investments may lose. The State and local governments would only gain several thousand dollars in additional revenues for each $100 million deposited with in-state banks, but the Primary Liquidity Portfolio could lose up to $2.53 million and the LGIP could lose up to $2.27 million in reduced yields. It is possible, though not likely, that the State could experience a slight net increase in total dollars if LGIP funds were deposited in in-state banks, and that localities could experience a slight net increase in total dollars if Primary Liquidity Portfolio funds were deposited in in-state banks. However, it appears more likely that the reduced yield in the investment portfolios could be far greater than whatever the State or localities could gain in increased revenue.

Scenario 3: Medium Economic Impact

Under the "medium economic impact" scenario, the assumptions fall in the middle of the high and low ends of the assumptions. The economic impacts for this scenario are estimated to be additional output ranging from $5.7 to 6.8 million, 21 to 30 additional jobs, additional State government revenues ranging from $215,000 to $310,000, and additional local government revenues ranging from $230,000 to $300,000.

Estimated Net Effects on State and Local Government. As in Scenario 2, the State and local governments would likely not gain as much in additional revenues as their investment funds may lose. The Primary Liquidity Portfolio could lose up to $2.53 million (if $100 million of it were deposited with in-state banks), and the LGIP could lose up to $2.27 million (if $100 million of it were deposited in Virginia banks).

The results of this scenario are very similar to those of Scenario 2, but the additional revenues to the State and local governments are slightly higher. However, the revenues are still not expected to offset the potential reduced yield in the portfolios. If $100 million from the Primary Liquidity Portfolio were deposited with in-state banks, the State would likely have a reduced yield, and it would likely be a greater reduction than the State and local governments' gain combined from their additional revenues ($445,000 to $610,000). On the other hand, for every $100 million from the LGIP that would be deposited with in-state banks, local governments could have either a slight net gain or a slight net reduced yield, although the net reduced yield appears more likely. The State may have a very slight net gain, because the State would not need to subtract most of the LGIP's potential reduced yield from its additional revenues. But if the LGIP's reduced yield is closer to

the $2.27 million end of the range, local governments' net reduced yield would be far greater than whatever the State may have gained.

TARGETING COMMUNITY BANKS COULD INCREASE LIKELIHOOD OF POSITIVE ECONOMIC DEVELOPMENT IMPACTS

Targeting an investment policy at community banks could increase the likelihood that positive economic development impacts would occur. While it is true that both large banks and community banks are involved in lending and economic development activities, community banks are statistically more likely to use deposits to provide loans, particularly to small businesses.

Loan-to-deposit ratios fluctuate daily and there is wide variation among banks. However, data obtained for 2008 and 2009 show that, as a group, the loan-to-deposit ratios for community banks in Virginia have tended to be higher in recent years than that of large banks. For example, on December 31, 2008, the median loan-to-deposit ratio for large banks was 79 percent and the median loan-to-deposit ratio for community banks was 94 percent. On December 31, 2009, the median loan-to-deposit ratio for large banks was again 79 percent and the median loan-to-deposit ratio for community banks was 87 percent.

Definition of a Small Business

The Small Business Administration defines a small business as a business that is organized for profit; has a place of business in the United States; operates primarily within the United States or makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials, or labor; is independently owned and operated; and is not dominant in its field on a national basis. The size of a small business varies by industry.

Small business lending also tends to make up a larger proportion of community banks' asset portfolios compared to large banks. Small businesses are considered vital to the U.S. economy because they account for approximately half of all private-sector employment. They are also considered to have a dynamic role in shifting resources from outdated processes and industries to more productive ones. Various studies have shown that community banks tend to have an advantage over large banks in their knowledge of local customers and, therefore, may be more likely to extend loans to small business.

Data collected by the FDIC confirms that small business lending tends to make up a greater share of community banks lending than it does for large banks. For large Virginia banks, small business loans comprised nine percent of the loan portfolio on average in 2009 whereas they made up over 21 percent of the loan portfolio in community banks. (These trends were confirmed in the April 2010 Special Inspector General for TARP *Quarterly Report to Congress*, which showed that the concentration of small business loans as a proportion of banks' loan portfolios decreases as bank size increases.) Also, as previously discussed, funds placed in community banks are more likely to translate to lending in Virginia (versus elsewhere) than is the case for large banks.

However, even if community banks are more likely to turn deposits into additional lending for small businesses in Virginia, this does not change the overall concern that additional deposits are not guaranteed to generate lending at any bank. Further, focusing a policy on community banks could also exacerbate the portfolio management problems for Treasury, particularly in the areas of liquidity and return. As previously mentioned, community banks do not offer the large negotiable securities in which Treasury typically invests and which offer more flexibility from an investment standpoint. In addition, many community banks do not issue large-dollar non-negotiable CDs. Therefore, to make the additional public funds more palatable to community banks, Treasury would have to break large negotiable investments into many small deposits for the community banks, which would probably be more difficult administratively for Treasury.

A policy to place more Treasury-managed funds in negotiable securities at large Virginia banks would appear to complicate Treasury's investment decisions and would have little expected economic development impact in Virginia.

Nonetheless, even though targeting a program at community banks may have a more negative impact on liquidity and return and may be more difficult to administer, given the uncertain link between negotiable securities and lending, it seems to make more sense than requiring Treasury to place more funds in negotiable securities at large Virginia banks. A policy aimed at negotiable securities would appear to complicate Treasury's investment decisions with little expected economic development impact in Virginia.

LENDING REQUIREMENTS ON BANKS WOULD HELP ENSURE PROGRAM OBJECTIVES ARE MET

The proposed policy of requiring a portion of Treasury's investment portfolios to be placed with Virginia banks appears to be aimed at stimulating economic development in the Commonwealth, mainly through increased lending by banks. However, if the State provides these additional funds to banks without specific lending requirements, banks could use the funds in any way they choose, which may or may not include lending. If funds are provided to banks at a reduced rate, there is even more incentive for the State to require banks to lend these funds, because the State and local governments may achieve a lower rate of return on the funds without any increase in economic development and lending.

Several states have dealt with this issue by establishing linked deposit programs (as described in Appendix F). Linked deposit programs provide funds to banks at below-market rates and require banks to use the funds to provide low-interest loans to certain types of borrowers, such as agricultural or small in-state businesses. There are several types of lending requirements that Virginia could impose on banks that accept additional public funds. For example, the State could require banks to increase their overall lend-

ing by a certain percentage or require them to lend a portion of the additional public funds they receive to specific types of customers, such as small businesses. The State could also require banks to provide loans at below-market rates, especially if public funds are provided to the banks at below-market rates.

Placing Lending Requirements on Banks Has Some Drawbacks

Placing lending requirements on banks that accept additional public funds will help stimulate lending; however, these requirements may have some consequences. Specifically, banks may not accept the funds if there are lending requirements attached, and if they do accept the funds, they may not be able to comply with the requirements because of a lack of creditworthy customers. In addition, such requirements could be administratively burdensome for Treasury to track and would place additional reporting requirements on banks.

Banks Say They Are Less Likely to Accept Additional Public Funds if There Are Lending Requirements Attached. As discussed in Chapter 3, Virginia banks have not accepted all of the public funds offered through the State's Public Funds CD Program for the past five offerings, and they accepted only 17 percent of the most recent offering on May 12, 2010. Banks responding to the JLARC staff bank survey say they would be even less willing to accept public funds if there were lending requirements attached to the funds. Almost one-half of banks (45 percent) responded that they would be "not likely" to accept additional public funds if their bank were required to use the funds to make certain types of loans, such as small business or agricultural loans. (Forty-three percent said they would be somewhat or very likely to accept the funds, and 12 percent said they were not sure.)

Some, but not all, banks said they would be more likely to accept public funds with lending restrictions if the funds were offered at a reduced rate. Of the banks who said they were "somewhat likely," "not likely," or "not sure" to accept funds if there were requirements, 32 percent said they would be more likely to accept the funds if they were offered at a reduced rate. However, 24 percent said they still would not accept the funds if there were requirements attached, even if the funds were offered at a reduced rate. (The remaining 44 percent said that they were not sure or that it depends on the requirements.)

Lending Requirements Could Be Burdensome for Both Treasury and the Banks. Lending requirements could be burdensome in several ways. First, to ensure that banks are complying with the requirements, Treasury would need to establish a process to monitor banks' lending activities. This would likely involve developing data

reporting requirements for banks, reviewing the bank's lending data on a regular basis, and potentially conducting random or annual audits of individual banks to ensure banks are complying with the requirements. Treasury staff would also need to implement some type of enforcement actions for banks that were not complying with the lending requirements. As discussed in Appendix F, most states with a linked deposit program have the equivalent of one full-time person dedicated to these responsibilities. Virginia Treasury staff also said they would most likely need to hire an additional person to handle the additional responsibilities for such a program.

Lending requirements could also be burdensome on the banks that receive public funds. As discussed above, banks would likely be required to provide lending data to Treasury on a regular basis so that Treasury could monitor their compliance with the lending requirement. Public depositories already have to provide Treasury with weekly or monthly data on their pledged collateral (the frequency depends on whether they participate in the collateral pool). Staff at the Community Bankers Bank indicated that these reporting requirements are burdensome on the banks, so additional reporting requirements are not likely to be welcomed. In addition, even if banks reported making loans under the program, it would be difficult to determine how many of these actually are new loans that would not otherwise have been made.

Banks May Be Unable to Comply With Lending Requirements. Banking experts indicated that it is unclear whether banks could comply with lending requirements because there may not be enough creditworthy customers to satisfy such requirements. As described previously, the primary reason banks have not been extending credit is that banks have not found potential borrowers to meet their credit standards and the demand for loans is down generally. The federal TARP helps illustrate this concern. Although TARP's purpose was to provide financial assistance to troubled banks and not to increase lending per se, it was believed that increased lending would also be a result of the program. However, this outcome has not occurred, in part for the reasons cited above.

This concern was also raised in the responses to the JLARC staff survey of banks. Sixty-six percent of banks responding to the survey said that they were not sure whether they could find enough creditworthy customers in their area to comply with the lending requirements, and 13 percent said they would not be able to comply with such requirements. Further, if banks were compelled to make riskier loans in order to comply with the lending requirement, staff at the State Corporation Commission said that this would likely raise red flags with bank regulators.

Providing the funds to banks at reduced interest rates could potentially increase the pool of eligible loan recipients, thereby stimulating lending. Federal Reserve staff stated that if funds are offered to banks at a reduced rate, loans or borrowers that seemed risky or unprofitable before might seem more viable to the bank. If banks were required to also provide loans to these customers at reduced rates, banks may still be unwilling to lend depending on what the interest rate requirements are for these customers. However, in the absence of requiring reduced lending rates, there is a risk that banks would just increase their profits.

Without Requirements, There Is No Guarantee That Banks Will Increase Lending

Financial experts interviewed for this study stated that without specific lending requirements attached to the funds, banks will use the additional public funds in the way that is in their best interest. If lending is the best use of the funds, they will make loans; if holding funds in reserve or using them to purchase securities would be the best business decision, then banks will do that. The banks themselves also indicated this would be the case. When asked on the JLARC staff bank survey how they would use increased public funds if there were no requirements, more than half of the banks (54 percent) said it would depend on market conditions at the time. (Forty-one percent said they would increase lending.)

If public funds are provided to banks at a reduced rate, there is even more incentive for the State to place lending requirements on these funds because the financial portfolios will be earning a lower rate of return. If this lower return does not result in increased lending, then the portfolios would simply be earning a lower return without achieving the desired economic development results.

A Congressional Oversight Panel report released in May 2010 provided further evidence that this is the case. The panel looked at whether TARP improved credit access for small companies and found that TARP did not improve lending to these companies. As stated by the chair of the oversight panel, "Our experience with TARP has shown that giving money to banks without strings attached does not produce the advertised result." Therefore, despite the increased administrative burden and potential costs for Treasury and the banks, it appears that lending requirements are necessary to ensure the program is achieving its objectives.

Recommendation (2). If the General Assembly requires additional public funds to be placed in Virginia banks, it may wish to consider attaching specific lending requirements to these funds. Banks could be required to make certain types of loans, such as small business

loans, or could be required to increase their overall lending to in-state individuals and businesses.

CONCLUSIONS

Whether it is desirable to require Treasury to place a larger portion of the Primary Liquidity Portfolio or the Local Government Investment Pool (LGIP) in Virginia banks largely relates to a policy decision over the trade-offs in Treasury's ability to meet the safety, liquidity, and return objectives for these portfolios versus the potential economic development and revenue benefits that may occur. Nearly half of the states have policies to place investments of public funds with in-state banks. However, few states have chosen to codify a minimum requirement.

Depending on how an investment policy is structured and how banks use the funds, there may be economic benefits for the local economy and positive State and local revenue impacts if optimistic assumptions are true. However, the potential economic development and revenue impacts are highly uncertain due to the uncertainty in the amount of new lending that would occur in the Commonwealth, and other conditions. Only the most optimistic of the three scenarios would lead to a minimally positive result. Therefore, it is likely that any increases in revenue would be insufficient to offset potential reductions in the yields from the portfolios. While requiring a portion of the Primary Liquidity Portfolio or LGIP to be placed in Virginia banks would not be advantageous from an investment standpoint, directing a policy at community banks and placing lending requirements on banks could increase the likelihood of positive economic development impacts and related increases in revenue.

List of Recommendations:

Placing More Treasury-Managed Funds in Virginia Banks

1. If the General Assembly requires a larger portion of Treasury-managed funds to be placed with banks operating in Virginia, any such requirement should be directed at the Primary Liquidity Portfolio rather than the Local Government Investment Pool. (p. 52)
2. If the General Assembly requires additional public funds to be placed in Virginia banks, it may wish to consider attaching specific lending requirements to these funds. Banks could be required to make certain types of loans, such as small business loans, or could be required to increase their overall lending to in-state individuals and businesses. (p. 72)

Appendix A

Study Mandate

A Resolution of the Joint Legislative Audit and Review Commission directing staff to study the benefits of placing more public deposits, investments and other Treasury managed funds with banks operating within the Commonwealth versus out-of-state institutions.

WHEREAS, it is desirable that individuals, families and businesses of all sizes thrive within the Commonwealth; and

WHEREAS, in order for consumers to make significant purchases and for job creation and businesses to grow, lending facilities must be readily available to qualified borrowers; and

WHEREAS, deposits are the primary source to fund lending by banks; and

WHEREAS, there has been a shift by the State Treasurer in recent years to direct state deposits and investments, as well as funds managed by the State Treasury towards out-of-state institutions that do not pay taxes within the Commonwealth and that do not generally make loans available to Virginia businesses; and

WHEREAS, the Joint Legislative Audit and Review Commission (JLARC) has not evaluated the impact of moving such state monies into out-of-state institutions; now, therefore, be it

RESOLVED, the staff be directed to study the benefits of placing more public deposits, investments and other Treasury managed funds with banks operating within the Commonwealth. The staff shall complete its work and submit a report of its findings and recommendations to the Commission by November 1, 2010.

Appendix B House Bill 246 and House Bill 2583

HOUSE BILL NO. 246
Offered January 13, 2010
Prefiled January 11, 2010

A BILL to amend and reenact § 2.2-4602 of the Code of Virginia, relating to local government investment pool; limitations.

Patrons-- Merricks, Athey, Marshall, D.W. and Rust

Referred to Committee on Appropriations

Be it enacted by the General Assembly of Virginia:

1. That § 2.2-4602 of the Code of Virginia is amended and reenacted as follows:

§ 2.2-4602. Local government investment pool created.

A. A local government investment pool is created, consisting of the aggregate of all funds from local officials handling public funds that are placed in the custody of the State Treasurer for investment and reinvestment as provided in this chapter.

B. The Treasury Board or its designee shall administer the local government investment pool on behalf of the participating local officials subject to regulations and guidelines adopted by the Treasury Board.

C. The Treasury Board or its designee shall invest moneys in the local government investment pool with the degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived. ~~Specifically, the~~ *Notwithstanding the foregoing, no less than 10 percent of local government investment pool assets shall be invested in time, savings, or demand deposits at financial institutions qualified to accept public deposits under Chapter 44 (§ 2.2-4400 et seq.) of this title. Other* types of authorized investments for local government investment pool assets shall be limited to those set forth for local officials in Chapter 45 (§ 2.2-4500 et seq.) of this title.

D. A separate account for each participant in the fund shall be kept to record individual transactions and totals of all investments belonging to each participant. A monthly report showing the changes in investments made during the preceding month shall be furnished to each participant having a beneficial interest in the local government investment pool. Details of any investment transaction shall be furnished to any participant upon request.

E. The Treasury Board or its designee shall administer and handle the accounts in the same manner as bond and sinking fund trust accounts.

F. The principal and accrued income, and any part thereof, of each and every account maintained for a participant in the local government investment pool shall be subject to payment at any time from the local government investment pool upon request, subject to applicable regulations and guidelines. Accumulated income shall be remitted or credited to each participant at least quarterly.

G. Except as provided in this section, all instruments of title of all investments of the local government investment pool shall remain in the custody of the State Treasurer. The State Treasurer may deposit with one or more fiscal agents or banks, those instruments of title he considers advisable, to be held in safekeeping by the agents or banks for collection of the principal and interest or other income, or of the proceeds of sale. The State Treasurer shall collect the principal and interest or other income from investments of the investment pool, the instruments of title to which are in his custody, when due and payable.

HOUSE BILL NO. 2583

An Act to amend and reenact § 2.2-4602 of the Code of Virginia, relating to local government investment pool; limitations.

[H 2583]
Approved March 30, 2009

Be it enacted by the General Assembly of Virginia:

1. That § 2.2-4602 of the Code of Virginia is amended and reenacted as follows:

§ 2.2-4602. Local government investment pool created.

A. A local government investment pool is created, consisting of the aggregate of all funds from local officials handling public funds that are placed in the custody of the State Treasurer for investment and reinvestment as provided in this chapter.

B. The Treasury Board or its designee shall administer the local government investment pool on behalf of the participating local officials subject to regulations and guidelines adopted by the Treasury Board.

C. The Treasury Board or its designee shall invest moneys in the local government investment pool with the degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived. ~~Specifically, the~~ *Notwithstanding the foregoing, no less than 10 percent of local government investment pool assets shall be invested in time, savings, or demand deposits at financial institutions qualified to accept public deposits under Chapter 44 (§ 2.2-4400 et seq.) of this title. Other* types of authorized investments for local government investment pool assets shall be limited to those set forth for local officials in Chapter 45 (§ 2.2-4500 et seq.) of this title.

D. A separate account for each participant in the fund shall be kept to record individual transactions and totals of all investments belonging to each participant. A monthly report showing the changes in investments made during the preceding month shall be furnished to each participant having a beneficial interest in the local government investment pool. Details of any investment transaction shall be furnished to any participant upon request.

E. The Treasury Board or its designee shall administer and handle the accounts in the same manner as bond and sinking fund trust accounts.

F. The principal and accrued income, and any part thereof, of each and every account maintained for a participant in the local government investment pool shall be subject to payment at any time from the local government investment pool upon request, subject to applicable regulations and guidelines. Accumulated income shall be remitted or credited to each participant at least quarterly.

G. Except as provided in this section, all instruments of title of all investments of the local government investment pool shall remain in the custody of the State Treasurer. The State Treasurer may deposit with one or more fiscal agents or banks, those instruments of title he considers advisable, to be held in safekeeping by the agents or banks for collection of the principal and interest or other income, or of the proceeds of sale. The State Treasurer shall collect the principal and interest or other income from investments of the investment pool, the instruments of title to which are in his custody, when due and payable.

2. That the provisions of this act shall not become effective unless reenacted by the 2010 Session of the General Assembly.

Appendix C

Research Activities and Methods

Key research activities and methods for this study included

- structured interviews with State agencies, and banking and finance experts,
- a survey of banks with a presence in Virginia,
- a survey of local government treasurers or finance officers,
- analysis of Federal Deposit Insurance Corporation (FDIC) and Treasury data,
- analysis of yield and interest rate data,
- use of economic development models,
- analysis of information provided by other states and national public finance organizations, and
- a review of banking and finance literature.

STRUCTURED INTERVIEWS

JLARC staff conducted extensive interviews with staff at the Virginia Department of the Treasury regarding the deposit of public funds in Virginia and the investment of funds managed by Treasury. JLARC staff also conducted interviews with banking and finance experts at the Federal Reserve Bank of Richmond, the State Corporation Commission Bureau of Financial Institutions, the Virginia Retirement System, community banks in Virginia, Standard & Poor's, the Virginia Bankers Association (VBA), and the Virginia Association of Community Banks. In addition, staff conducted interviews with the Virginia Department of Accounts, the Virginia Small Business Financing Authority, the Virginia Association of Counties, and the Virginia Municipal League.

SURVEY OF BANKS WITH A PRESENCE IN VIRGINIA

JLARC staff conducted a survey of 141 banks with a presence in Virginia. The banks surveyed were primarily members of the Virginia Bankers Association, which includes most banks with a presence in the state. JLARC staff also obtained contact information for those banks that are not members of VBA, where possible. The purpose of the survey was to learn more about how banks current-

ly use public funds and how they might use increased public funds. In particular, the survey requested the following:

- background information about the banks,
- public deposits and investments held by banks,
- bank interest in receiving additional public funds and how these funds would be used,
- bank participation in the Virginia Public Funds CD Program, and
- information about banks' lending practices.

Forty-eight banks responded to the survey resulting in a response rate of 34 percent. This is comparable to the response rate VBA reports for surveys it conducts of its members. The vast majority of banks responding to the survey were community banks. Respondents were fairly evenly distributed throughout the State.

SURVEY OF VIRGINIA LOCAL GOVERNMENT TREASURERS AND FINANCE OFFICERS

JLARC staff also conducted a survey of all city and county treasurers and finance officers in Virginia to learn more about how local governments manage their public funds. The survey requested information on

- local governments' participation in the Local Government Investment Pool (LGIP),
- local governments' deposits of public funds, and
- local governments' investments outside of the LGIP.

Seventy-three localities responded out of a total of 134 who received the survey, for a response rate of 54 percent. Respondents included both large and small localities and were fairly evenly distributed throughout the State.

ANALYSIS OF TREASURY AND FDIC INFORMATION AND DATA

Data and other information provided by Treasury and available from the FDIC were extensively used for this study to assess the extent to which public deposits and investments are placed in Virginia banks, the potential impacts on the Primary Liquidity Portfolio and LGIP of placing additional funds in Virginia banks, and the potential economic development impacts of placing additional public funds in Virginia banks. Data and information provided by Treasury and analyzed by JLARC staff include

- historical Primary Liquidity Portfolio and LGIP balances;
- investment guidelines for the Primary Liquidity Portfolio and the LGIP;
- bank ratings from a private rating firm used by Treasury;
- State and local public deposit data, by bank;
- detailed investment data for the Primary Liquidity Portfolio and the LGIP; and
- data on the Public Funds CD Program, by bank.

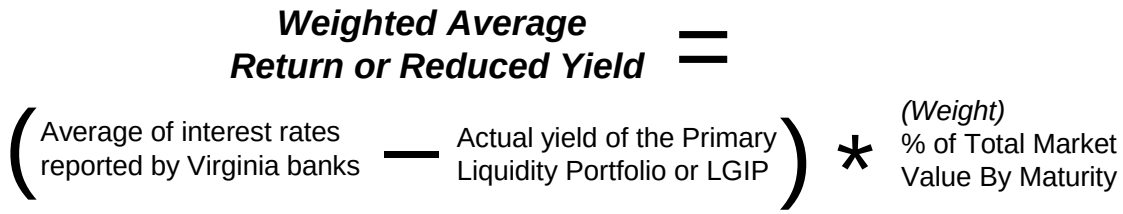
Bank-level FDIC data analyzed by JLARC staff for the study include

- deposit market share,
- asset size,
- loan-to-deposit ratio,
- loans by type,
- small business loans as a percentage of total loans.

ANALYSIS OF YIELD AND INTEREST RATE DATA

As briefly discussed in Chapter 4, JLARC staff calculated a weighted average return or reduced yield based on a comparison between the actual yield for the Primary Liquidity Portfolio and LGIP between FY 2007 and FY 2010 (through December 2009) and interest rates reported by a limited number of Virginia banks (six out of 48 survey respondents) for non-negotiable CDs issued to public entities over the last three and a half years. Figure C-1 further illustrates the variables used in this calculation. To ensure comparable maturities, the weights applied in these calculations were the percent of the total market value by maturity for the Primary Liquidity Portfolio and the LGIP at the end of each fiscal year (Table C-1).

Figure C-1: Calculation of the Weighted Average Return or Reduced Yield



Source: JLARC staff analysis.

Table C-1: Percent of Total Market Value by Maturity Group

Number of Months	FY 2010	FY 2009	FY 2008	FY 2007
Primary Liquidity Pool				
Less than 6	55.8%	5.2%	69.6%	75.0%
6 to 12	15.4	9.5	10.0	10.3
More than 12	28.8	85.3	20.3	14.7
Local Government Investment Pool				
Less than 6	70.5%	26.2%	77.1%	81.6%
6 to 12	17.1	18.7	7.7	15.7
More than 12	12.4	55.1	15.2	2.7

Source: Data provided by the Virginia Department of Treasury.

In addition to reporting interest rates paid on non-negotiable CDs issued to public entities, banks were also asked at what interest rate (comparable to or reduced relative to LIBOR rates) and maturity they would accept additional public funds. JLARC staff then calculated a weighted average return or reduced yield (using the steps shown in Figure C-1, but replacing Virginia bank interest rates with LIBOR rates) based on a comparison of recent historical LIBOR interest rates and reduced LIBOR rates (0.25 or 0.50 percent below LIBOR) and the actual yields of the Primary Liquidity Portfolio and LGIP. The weights listed in Table C-1 were also applied to these calculations.

JLARC staff also surveyed local government treasurers for their average annual interest rates earned on demand deposit and savings accounts in Virginia banks (FY 2005–FY 2009) and compared these rates to the actual yields of the Primary Liquidity Portfolio and LGIP. (JLARC staff did not survey local governments for FY 2010 interest rates because this data was not available at the time the survey was administered.) However, weights were not applied to these average annual interest rates because demand deposit and savings accounts do not have maturity terms like non-negotiable CDs.

JLARC staff also asked Virginia banks to provide interest rates paid on negotiable CDs or commercial paper issued to public entities over the last three and a half years. JLARC staff was only able to obtain negotiable interest rate data for two Virginia banks for a very short period of time (mid-March through mid-May 2010). These rates were compared to interest rates for negotiable securities reported by the Federal Reserve Bank and to the actual yields of the Primary Liquidity Portfolio and LGIP.

ECONOMIC DEVELOPMENT MODELS AND ANALYSIS

Appendix D provides a detailed description of the methods used in this study to estimate the potential economic development and

revenue impacts from placing additional public funds in Virginia banks. To estimate the direct economic development effects of such a policy, JLARC staff used FDIC data to estimate the types of loans that would be made and the Bureau of Labor Statistics Consumer Expenditure Survey to determine where the funds from these loans would be spent. Direct effects on employment are estimated through regression analysis. To estimate the indirect and induced effect of such a policy, JLARC staff used the economic multipliers available from three widely-used economic input-output models. Finally, JLARC staff consulted with the College of William and Mary and the University of Virginia regarding the multipliers from the input-output models.

ANALYSIS OF INFORMATION FROM OTHER STATES AND NATIONAL PUBLIC FINANCE ASSOCIATIONS

To obtain information on other states' policies regarding the deposit and investment of public funds, JLARC staff attempted to contact all other state treasury departments. Thirty-four state treasury departments responded to JLARC staff's solicitation of information. Other states provided information on their deposit and investment laws and policies, including the following:

- whether they have a statutory requirement or state policy that funds be invested in banks with a physical presence in their state;
- whether they have a public funds CD program, and if so, the details of their program;
- whether they have a linked deposit program; and
- whether they require a portion of their LGIP (if they have an LGIP) to be invested in in-state banks.

JLARC staff also contacted national public finance organizations, including the Government Finance Officers Association (GFOA) and the National Association of State Treasurers. The GFOA had the most extensive guidance on the investment of public funds. JLARC staff conducted an interview with GFOA staff and reviewed guidance published by GFOA, including various GFOA best practices and the GFOA publication, *Investing Public Funds.*

REVIEW OF BANKING AND FINANCE LITERATURE

As part of the research for this study, JLARC staff conducted an extensive review of banking and finance literature, much of which was obtained from websites specializing in these issues. In addition, JLARC reviewed the following:

- *Banking Regulation,* published by the Federal Reserve Bank of Kansas City;
- Special Inspector General for the Troubled Asset Relief Program (SIGTARP) *Quarterly Reports to Congress* (February 6, 2009 through April 20, 2010);
- Standard & Poor's *Fund Ratings Criteria;*
- Banking and finance journal articles; and
- *Wall Street Journal* articles for current events in the banking and finance industry.

Appendix D

Estimating the Economic Impacts in Virginia

There are three types of effects to take into account when estimating economic impacts: direct, indirect, and induced effects. A direct effect is the change in final demand associated with a particular activity. For example, the direct effect of an increase in spending on new homes is to increase new home construction and sales, and therefore to increase output of the residential real estate and construction sectors.

The indirect effect is the accumulated increase in intermediate demand for inputs to the sector directly affected. For example, as new home sales increase, increased construction of new homes results in increased purchases of inputs such as concrete, bricks, mortar, electrical wiring, lumber, architectural design and engineering services, and so on. The in-state concrete industry, in turn, then purchases more gravel and equipment to satisfy the increased demand for their products. The in-state gravel and limestone quarrying companies increase their mining activities to satisfy the increased demand of the concrete industry. The increase in intermediate demand in each sector gets smaller and smaller as the impact ripples through the Virginia economy, in proportion to the share of those inputs that are produced in Virginia, and those outside of Virginia. Eventually, the marginal increase approaches zero. The accumulated effect is the indirect effect of the initial direct increase in demand.

The induced effect is due to the increase in incomes that are brought about by the direct and indirect increases in economic activity. For example, the workers and contractors who construct new homes receive wages and salaries that are assumed to be used in-state to purchase food, clothing, housing, entertainment, computers, televisions, and all of the items that households purchase which constitute private consumption. In addition, a portion of that income is saved, used to pay existing debts, or is used to pay government taxes, so it is not at the time reintroduced into the economy. The purchase of consumer goods in-state is assumed to initialize an increase in spending in the Virginia economy that stimulates demand and promotes economic activity.

The direct effects of increasing State deposits with Virginia banks are first examined. Then the indirect and induced effects are estimated. Third, the impact of all of these types of effects on Virginia

government revenues is estimated. Finally, the sensitivity of the economic impact estimates to key assumptions made in Chapter 5 is examined.

DIRECT EFFECTS

A key question for estimating the economic impacts of requiring the State to deposit more money in in-state banks is: Who would be spending the money, and on what? The banks themselves should not be directly spending the money. They would be expected to pass most of the money on in loans to their customers (or to hold some of it in reserve), so the money itself would not be theirs to spend (although they would be free to spend the profits – defined as interest they would have coming in from the loans minus what they pay out to the depositors). By determining what types of loans from Virginia banks were made in the recent past, it can be inferred in which sectors new loan money would be spent. In this section, first the direct effects of increased State deposits on the banking sector are estimated. Then the direct effects of the sectors in which the loans are made are estimated.

Direct Effects on the Banking Sector

JLARC staff estimate that requiring the State to deposit more funds in Virginia banks may increase the banks' profits slightly. However, this policy change is not expected to cause any increase in employment in the banking sector.

Output. Estimating the economic impacts on the banking sector requires some assumptions to be made. For instance, suppose that the State were to deposit an additional $100 million in Virginia banks and branches, and that the loan-to-deposit ratio is 79 percent (which is the average for Virginia banks from the last 10 years, according to the Federal Deposit Insurance Corporation). In that case, after meeting reserve and other requirements with $21 million of the additional $100 million, Virginia banks could be expected to have an additional $79 million to lend out. For every one percent profit Virginia banks can make from this amount (profit being the rate at which they loan the money out minus the rate of interest they must pay out to their depositors) they would be earning $0.79 million. In this way, if the spread between what they earn on their loans and what they must pay their depositors is five percent, they would be earning $3.95 million from this amount. In other words, for every additional $100 million the State would deposit with in-state banks, Virginia banks would gain about $790,000 for every one percent difference between what they pay to their depositors and what they earn on their loans. (Banks would also be earning something on the $21 million used to meet

the reserve and other requirements, but this amount is assumed to be negligible compared to what they would earn off loans.) To provide some perspective, the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce says that in 2007, total output in the banking sector was $15,936,000,000.

Employment. Given that in recent years the number of jobs in Virginia banks has decreased while the volume of deposits has increased substantially, it seems unlikely that any amount of additional deposits the State could make in Virginia banks would reverse this pattern. Table D-1 shows the overall pattern using the most recent data available. In 2007, deposits in Virginia banks have increased from the previous year by approximately $9.4 billion and in 2008 they increased by approximately $11.7 billion, while Virginia banks were reducing their employment levels by 1,903 and 4,962, in 2007 and 2008, respectively. If the State were to make additional deposits in the range of $0.5 to $1.5 billion, the amount appears to be too small to reverse this overall trend.

Table D-1: Deposits and Employment in Virginia Banks in Recent Years

Year	Deposits in Virginia Banks ($ Millions)	Annual Change in Deposits ($ Millions)	Employment in Virginia Banks	Annual Change in Employment in Virginia Banks
2006	$172,785		77,432	
2007	182,183	$9,398	75,529	-1,903
2008	193,910	11,727	70,567	-4,962

Source: Federal Deposit Insurance Corporation, Deposit Market Share Report as of June 30, 2006, 2007 and 2008; Bureau of Economic Analysis, U.S. Department of Commerce, Table SA25N - Total full-time and part-time employment by NAICS industry. http://www.bea.gov

Direct Effects on the Sectors Receiving Loans

The Federal Deposit Insurance Corporation (FDIC) has data from Virginia banks on what types of loans they make: those secured by real estate, farm loans, commercial and industrial loans, and loans to individuals. Table D-2 shows the FDIC data on loans made by Virginia-headquartered banks from the most recent four quarters available, and provides an average percentage for each type of loan across the four quarters. Percentages were also calculated using FDIC data from large national banks that are not headquartered in Virginia, yet that have a presence in Virginia. These percentages were close to those from Virginia banks. So it is assumed that the percentages shown in Table D-2 would also apply to the lending practices of the Virginia branches of major national banks and other banks with a presence in Virginia as well. With this as-

Table D-2: Amounts Loaned by Virginia Banks

	Total Loans ($ in thousands) as of:				
Type of Loan	**12/31/2009**	**9/30/2009**	**6/30/2009**	**3/31/2009**	**Average Percentage**
Real Estate	$82,329,767	$95,648,801	$94,413,835	$94,448,412	38.04%
Construction and Land Development	14,156,095	13,487,978	13,994,415	13,724,105	5,74%
Home Equity	28,160,680	15,509,763	16,238,292	16,474,025	7.93%
Farm	193,531	212,289	214,033	189,365	0.08%
Commercial and Industrial	41,780,149	33,837,975	39,270,077	40,613,156	16.12%
Individual	71,741,564	77,262,612	79,596,431	80,964,300	32.09%
TOTAL	**$238,361,786**	**$235,959,418**	**$243,727,083**	**$246,413,365**	**100.00%**

Source: Federal Insurance Deposit Corporation, Statistics on Depository Institutions Report. www2.fdic.gov/sdi/main.asp

sumption in place, then some of the economic impacts of requiring more State deposits in Virginia banks can be estimated.

In What Sectors Are Real Estate Loans Spent? This category includes loans that are secured by real estate. Most of the loans in this category would be spent in the real estate sector (with the exception of construction and land development loans and home equity loans). The FDIC disaggregates loans in this category into five main groups: construction and land development; commercial real estate; multifamily residential real estate; one-to-four-family residential; and farmland. The FDIC definitions for these five groups are shown in Exhibit D-1. One-to-four-family residential loans are further disaggregated into three groups: loans secured by first liens (mortgages); loans secured by junior liens (junior mortgages); and home equity loans.

Exhibit D-1: FDIC Definitions of Five Groups of Real Estate Loans

Construction and land development: Construction and land development loans secured by real estate held in domestic offices. This item includes loans for all property types under construction, as well as loans for land acquisition and development.

Commercial real estate: Nonresidential loans (excluding farm loans) primarily secured by real estate held in domestic offices.

Multifamily residential real estate: Multifamily (five or more) residential property loans secured by real estate held in domestic offices.

One-to-four family residential: Total loans secured by one-to-four family residential properties (including revolving and open-end loans) held in domestic offices.

Farmland: Loans secured by farmland held in domestic offices.

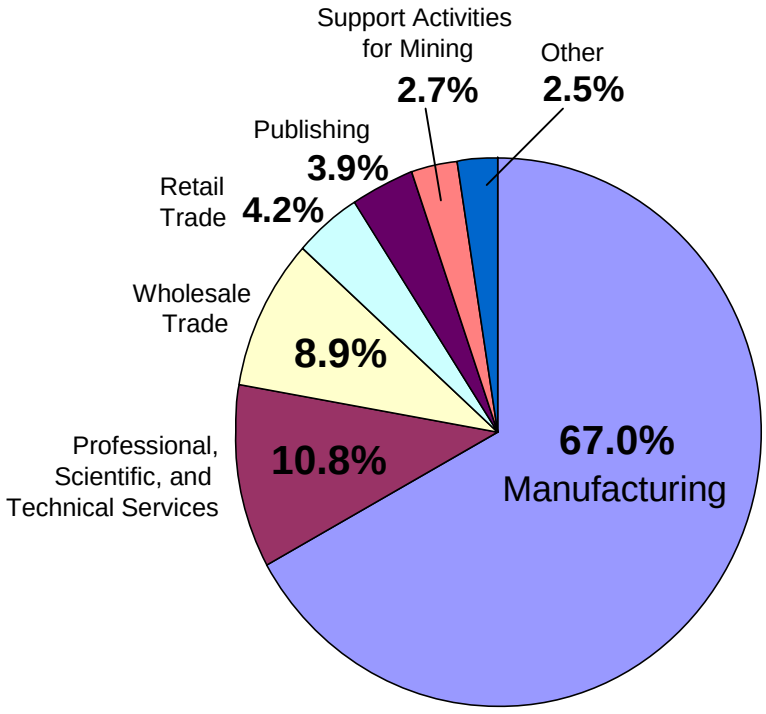
Source: Federal Insurance Deposit Corporation, Statistics on Depository Institutions Report. www2.fdic.gov/sdi/main.asp

It is assumed that most of the loan money in this category is spent in the real estate sector. One exception is construction and land development loans, which are assumed to be spent in the construction sector. The other exception is home equity loans, which are assumed to be spent like loans to individuals, which are discussed further below.

In What Sector Are Farm Loans Spent? In contrast to farmland real estate loans, which are assumed to be used primarily to acquire farmland, this type of loan is assumed to be used primarily to finance agricultural production. Therefore, the money used for this type of loan is assumed to be spent in the agriculture sector.

In What Sectors Are Commercial and Industrial Loans Spent? This question can be answered straightforwardly if a key assumption is made. The assumption is that the percentage of private investment in each sector serves as a proxy for the percentage of commercial and industrial loans made by banks to (and spent by) each sector. Figure D.1 shows investment data compiled by the BEA for 2006 for commercial and industrial sectors (excluding real estate and

Figure D-1: Investment by Commercial and Industrial Sector in 2006



Source: Bureau of Economic Analysis, U.S. Department of Commerce, Regional Input-Output Modeling System (RIMS II) Table E -- The Input-Output Commodity Composition of NIPA Private Fixed Investment in Equipment and Software.

construction, which were already counted in the FDIC loan data). The sector that receives the largest volume of investments is manufacturing (67.0 percent). The remaining sectors account for a smaller volume of investment in Virginia.

In What Sectors Are Loans to Individuals Spent? Loans to individuals are essentially consumer loans. As long as these loans result in new spending in-state, they would have an impact similar to that of personal income on the State's economy as an infusion of cash, most frequently in the retail trade sector. They would not have this impact if money from loans would be used to consolidate existing debts (which was money already spent in the past), set aside as savings, spent on out-of-state vacations, used to pay income or property taxes, or if money were otherwise to be spent out-of-state. Loans to individuals include: (1) credit card loans, (2) all extensions of credit to individuals for household, family, and other personal expenditures arising from prearranged overdraft plans and other revolving credit plans not accessed by credit cards, and (3) other loans to individuals. Home equity loans can also be used in ways similar to consumer loans, but the only difference is that they are secured by real estate.

The Federal Deposit Insurance Corporation (FDIC) characterizes "Other loans to individuals" as:

> Other loans to individuals for household, family and other personal expenditures (consumer loans) including single payment, installment and all student loans. Included are loans for such purposes as: (1) purchases of private passenger automobiles, pickup trucks, household appliances, furniture, trailers, and boats; (2) repairs or improvements to the borrower's residence (not secured by real estate); (3) educational expenses, including student loans; (4) medical expenses; (5) personal taxes; (6) vacations; (7) consolidation of personal (non-business) debts; purchases of real estate or mobile homes (not secured by real estate) to be used as a residence by the borrower's family; and (9) other personal expenditures.

The Consumer Expenditure Survey provides some indication of what consumers are spending their money on and how much, on average. Even though some individuals may spend large portions of their incomes or loans on cars, home improvements, furniture, education, medical expenses, or real estate or mobile homes at a given time, the majority may not, which would be reflected in the average expenditures in these categories.

The Consumer Expenditure Survey is conducted by the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor and admin-

istered by the Census Bureau. It provides information on the buying habits of American consumers, and also information on consumer demographics and income. The survey itself consists of two parts: the Interview Survey and the Diary Survey.

The Interview Survey is administered over a period of five quarters and collects expenditure data from the previous three months. This survey is meant to capture large purchases, such as spending on furniture, clothing, and utilities. Each quarter of the year, approximately 15,000 households are visited nationwide.

The Diary Survey is self-administered and captures purchases by a household over a two-week period. The diary allows respondents to record all purchases such as spending on food at home, food away from home, and clothing. Each quarter of the year, approximately 3,200 households are visited nationwide in the Diary Survey.

A previous JLARC study made extensive use of Consumer Expenditure Survey data (*Technical Report: The Costs of Raising Children, November 2000)*. The question arose about whether the expenditures of Virginia consumers were fundamentally the same as those of consumers nationwide. Virginia consumers in the sample were separated from the nationwide sample. No significant differences in the expenditures of Virginia consumers and consumers nationwide were found, so it was concluded that the nationwide patterns were a good representation of the spending patterns of Virginia consumers.

Table D-3 shows the average annual expenditures of consumers in 2006 (the most recent year available for the BLS results), and the sectors in which the corresponding expenditures could be spent in-state. Note that of the $48,398 total average consumer expenditures, $10,646 (about 22 percent) was spent paying off debts (from previous spending), transferred to government as property taxes, or set aside as savings (for future possible spending). The remaining 78 percent could result in new in-state spending, which would have ripple effects throughout the Virginia economy.

Summarizing the results from Table D-3, Table D-4 shows the percentages of new consumer spending that could be spent in-state in each sector. Of course, some of the spending in each sector could be spent out-of-state. Therefore, some assumptions will have to be made regarding what proportion of the new spending in each sector would be made in-state.

To summarize, the assumed percentages of all loan money that is spent in each sector are shown in Table D-5.

Table D-3 Average Annual Expenditures, by Type of Expenditure and Corresponding Sector

Type of Expenditure	Average Annual Amount (Dollars)	Sector in which Expenditure Could Be Spent In-State
Food		
Food at home	$3,417	Retail trade
Food away from home	2,694	Food services and drinking places
Alcoholic beverages	497	Retail trade
Housing		
Shelter		
Owned dwellings		
Mortgage interest and charges	3,764	Paying back debt – doesn't count
Property taxes	1,649	Transfer to government – doesn't count
Maintenance, repair, insurance, other expenses	1,115	Other – repair and maintenance
Rented dwellings	2,590	Rental and leasing services
Other lodging	567	Accommodation
Utilities, fuels, and public services	3,397	Utilities
Household operations	948	Other – personal and laundry services
Housekeeping supplies	640	Retail trade
Household furnishings and equipment	1,708	Retail trade
Apparel and services	1,874	Retail trade
Transportation		
Vehicle purchases (net outlay)	3,421	Retail trade
Gasoline and motor oil	2,227	Retail trade
Other vehicle expenses		
Vehicle finance charges	298	Paying off debt – doesn't count
Maintenance and repairs	668	Other – repair and maintenance
Vehicle insurance	886	Insurance carriers and related services
Vehicle rental, leases, licenses, other charges	482	Rental and leasing services
Public transportation	505	Transit and ground passenger transport.
Health care		
Health insurance	1,465	Insurance carriers and related services
Medical services	670	Ambulatory health care and hospitals
Drugs	514	Retail trade
Medical supplies	117	Retail trade
Entertainment		
Fees and admissions	606	Performing arts, museums, and related
Television, radio, sound equipment	906	Retail trade
Pets, toys, and playground equipment	412	Retail trade
Other supplies, entertainment supplies, etc.	451	Retail trade
Personal care products and services	585	Retail trade
Reading	117	Retail trade
Education	888	Educational services
Tobacco products and smoking supplies	327	Retail trade
Miscellaneous	846	Other
Cash contributions	1,869	Other
Personal insurance and pensions		
Life and other personal insurance	322	Insurance carriers and related activities
Pensions and social security	4,948	Savings and taxes -- doesn't count
Total Average Annual Consumer Expenditures	**$48,398**	

Source: Consumer Expenditure Survey, Bureau of Labor Statistics, U.S. Department of Labor; JLARC staff analysis.

Table D-4: Percentages of Consumer Spending by Sector

Sector	Percent Consumer Spending
Retail Trade	49.13%
Utilities	9.64
Rental and leasing services	8.77
Other services, including	
Repair and maintenance	5.15
Personal and laundry services	2.71
Food service and drinking places	7.69
Insurance carriers and related activities	7.63
Education	2.54
Ambulatory health care and Hospitals & institutions	1.91
Performing arts, museums, and related activities	1.73
Accommodation	1.62
Transit and ground passenger transportation	1.44

Note. "Consumer Spending" is defined as new, potentially in-state spending and does not include amounts that go toward paying off existing debts, government property taxes, or savings. Also excluded from the percentages are in-cash contributions and "miscellaneous" spending.

Source: JLARC staff analysis.

Table D-5: Percentages of Aggregate Loan Amount Assumed to be Spent in Each Sector

Sector	Percentage of Loans Spent in Each Sector
Real Estate	38.04%
Retail Trade	20.34
Manufacturing	10.80
Construction	5.74
Utilities	3.88
Rental and leasing services	3.51
Other services, including Repair and maintenance Personal and laundry services	3.14
Food service and drinking places	3.08
Insurance carriers and related activities	3.06
Professional, scientific and technical services	1.74
Wholesale Trade	1.43
Education	1.01
Ambulatory health care and Hospitals & institutions	0.77
Performing arts, museums, and related activities	0.69
Accommodation	0.65
Transit and ground passenger transportation	0.63
Support activities for mining	0.61
Publishing with software	0.58
Farm	0.08
Other	0.40

Source: JLARC staff analysis.

Output. To estimate the increase in economic activity across all of the sectors in which loan money is spent, some additional assumptions must be made. One is derived from the Consumer Expenditure Survey results: that 22 percent of Individual and Home Equity loans goes toward paying off debt, government taxes, or savings, and therefore is not reintroduced into the State economy as new spending. Further, suppose that: the loan-to-deposit ratio is 79 percent; 100 percent of the loans are made in-state; 100 percent of the loans would not be made if the State did not deposit additional money with in-state banks; and 100 percent of the loan money is spent in-state. (While these four assumptions are unrealistic, they illustrate the upper bound of the maximum direct additional economic activity that could be associated with additional State deposits in in-state banks.) Then, if all loans are made and spent completely in-state, for every additional $100 million the State would deposit with in-state banks, economic activity in these other sectors would directly increase by approximately $36.1 million at the most (Table D-6).

Table D-6: Maximum Direct Effect in Economic Activity by Sector Associated with Additional $100 Million of State Deposits with In-State Banks

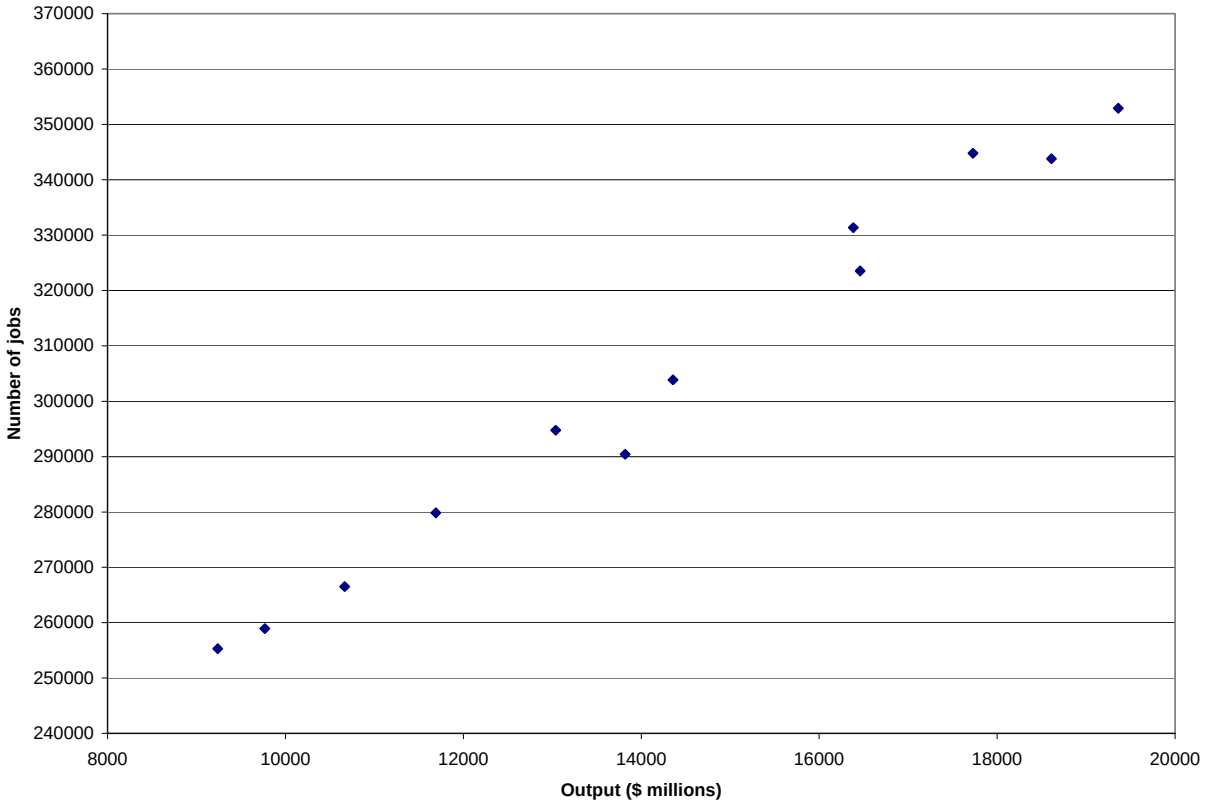
Sector	Direct Increase in Output by Sector ($ thousands)
Real Estate	$30,048
Retail Trade	12,650
Manufacturing	8,530
Construction	4,536
Utilities	2,391
Rental and leasing services	2,279
Other services, including Repair and maintenance Personal and laundry services	1,938
Food service and drinking places	1,898
Insurance carriers and related activities	1,883
Professional, scientific and technical services	1,375
Wholesale Trade	1,133
Education	622
Publishing with software	498
Ambulatory health care and Hospitals & institutions	474
Performing arts, museums, and related activities	425
Accommodation	401
Transit and ground passenger transportation	357
Support activities for mining	348
Farm	63
Other	316
TOTAL	**$72,164**

Note: These estimates assume a loan-deposit ratio of .79, that 100 percent of the loans are made in-state, that 100 percent of these loans would not be made if the State did not deposit additional money with in-state banks, and that 100 percent of the loan money is spent in-state.

Source: JLARC staff analysis.

Employment. Economic output has been a good predictor over the years of the number of jobs in some sectors, while it has not been such a good predictor in other sectors. For example, from 1997 to 2008, the number of jobs in the construction sector has been strongly associated with the amount of economic output in that sector (Figure D-2). In fact, a regression based on these twelve points in which output predicts the number of jobs in the construction sector indicates a very strong association (R-Square = .99), and that for every additional million dollars in output, there are on average an additional 9.98 construction jobs. The strong association between economic output and jobs in this sector may indicate that as demand increases, more employees tend to be hired to meet the demand. In contrast, output is not such a good predictor of the number of jobs in the manufacturing sector. From 1997 to 2008, the number of manufacturing jobs in Virginia has been shrinking, while the economic output of the sector has tended to expand. This situation could be reflecting changing rates of productivity in manufacturing, while rates of productivity in the construction industry may have remained relatively constant in the last dozen years. As a result, a plot of the number of jobs with economic out-

Figure D-2: Number of Jobs and Economic Output in the Construction Sector, 1997-2008



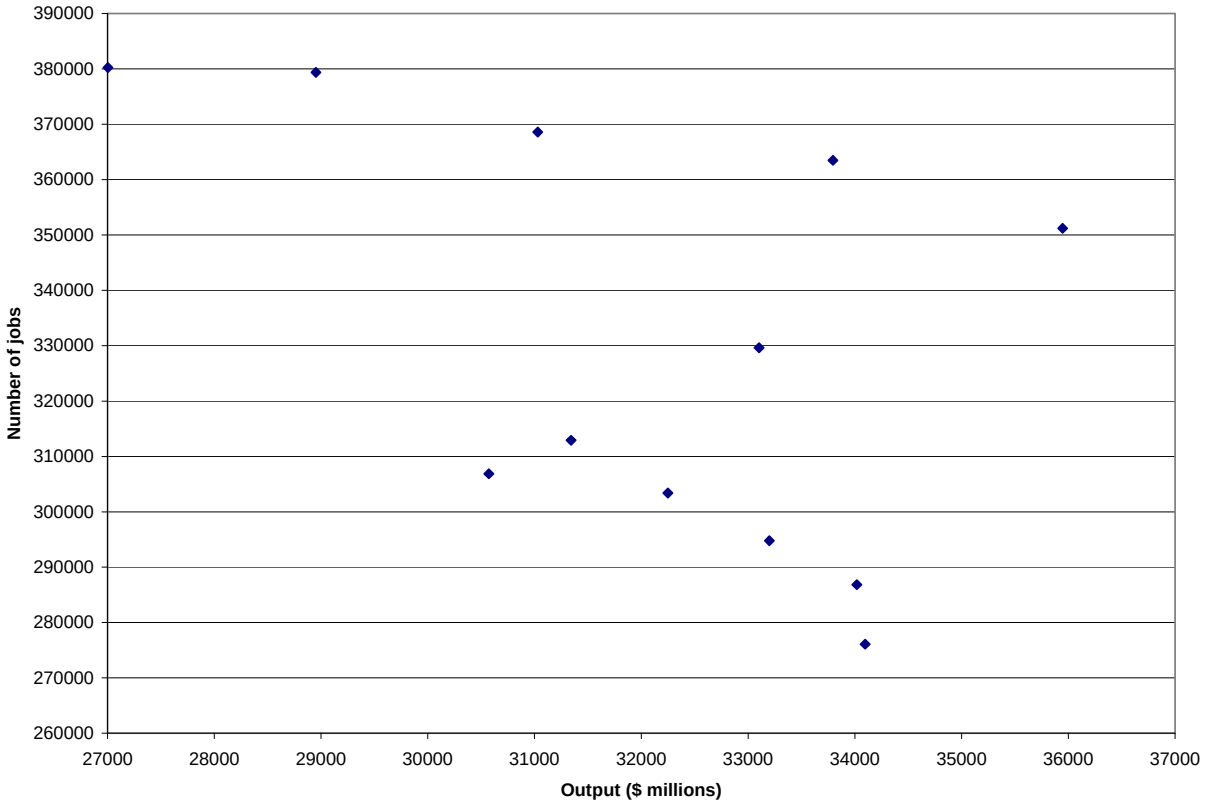
Source: Bureau of Economic Analysis, U.S. Department of Commerce, "Gross Domestic Product by State" and Table SA25N - Total full-time and part-time employment by NAICS industry.

put in the manufacturing sector (Figure D-3) does not show the clear linear pattern as shown in the construction sector. In fact, a regression line is not very useful in the manufacturing sector for predicting the number jobs based on economic output, because it indicates a weak (R-Square = .24) *negative* association between jobs and output. In this case, using an increase in demand to predict a decrease in the number of jobs does not make much sense.

Plots of the number of jobs with economic output in each sector listed in Table D-6 were examined. Regressions were run in which the economic output predicted the number of jobs of each sector. Most sectors indicated a strong, linear association between output and jobs, like the pattern shown for the construction sector. A few sectors showed weak or nonsensical associations, such as that shown in the manufacturing sector.

Table D-7 summarizes the results of the regression for each sector, and then uses these results to estimate the direct effects on em-

Figure D-3: Number of Jobs and Economic Output in the Manufacturing Sector, 1997-2008



Source: Bureau of Economic Analysis, U.S. Department of Commerce, "Gross Domestic Product by State" and Table SA25N - Total full-time and part-time employment by NAICS industry.

Table D-7: Direct Employment Effects Associated With Additional $100 Million of State Deposits With In-State Banks

Regression Analysis Results

Sector	R-Square	Coefficient (# jobs per $ million output)	Std. Error	Lower Bound	Upper Bound	Direct Effect on Output ($ million)	Direct Effect on Jobs--Lower Bound	Direct Effect on Jobs--Upper Bound
Real Estate	0.94	3.65	0.28	3.10	4.20	$30.048	93	126
Retail Trade	0.95	5.08	0.38	4.32	5.83	12.650	55	74
Manufacturing	.024	-7.40	4.19	-15.61	0.82	8.530	0	0
Construction	0.99	9.98	0.39	9.22	10.72	4,536	42	49
Utilities	0.08	-0.10	0.10	-0.30	0.10	2.391	0	0
Rental and leasing services	0.32	0.91	0.45	0.03	1.79	2.279	0	4
Other services, including Repair and maintenance Personal and laundry services	0.98	10.31	0.41	9.50	11.11	1.938	18	22
Food service and drinking places	0.99	0.05	0.00	0.05	0.05	1.898	0	0
Insurance carriers and related activities	0.79	2.85	0.49	1.90	3.81	1.883	4	7
Professional, scientific and technical services	0.97	5.33	0.30	4.94	6.12	1.375	7	8
Wholesale Trade	0.92	2.21	0.21	1.80	2.62	1.133	2	3
Education	0.98	19.40	0.81	17.81	20.99	0.622	11	13
Publishing with software	0.01	-0.66	2.67	-5.88	4.56	0.498	0	0
Ambulatory health care and Hospitals & institutions	0.98	7.49	0.33	6.85	8.13	0.474	3	4
Performing arts, museums, and related activities	0.91	24.79	2.65	19.60	29.98	0.425	8	13
Accommodation	0.79	0.19	0.03	0.12	0.26	0.401	0	0
Transit and ground passenger transportation	0.84	19.90	2.94	14.13	25.67	0.357	5	9
Support activities for mining	0.98	0.08	0.00	0.07	0.09	0.348	0	0
Farm	0.70	-28.15	6.17	-40.24	-16.06	0.063	0	0
Other	0.99	4.30	0.13	4.04	4.57	0.316	1	1
TOTAL						**$72.164**	**250**	**334**

Note: These estimates assume a loan-deposit ratio of 0.79, that 100 percent of the loans are made in-state, that 100 percent of these loans would not be made if the State did not deposit additional money with in-state banks, and that 100 percent of the loan money is spent in-state.

Source: JLARC staff analysis.

ployment. The R-square for each regression is shown in the second column, and the slope for the regression line is shown in the third column (the coefficient representing the number of jobs per every million dollars of output). Because some of these regressions are based on as few as 11 data points, the standard error of the coefficient is shown in the fourth column, and confidence intervals were used. Confidence intervals for the coefficients were constructed at the 95th significance level (namely, by subtracting 1.96 times the standard error from the coefficient to get the lower bound, and by adding 1.96 times the standard error to the coefficient to get the

upper bound). The lower and upper bounds of each confidence interval are shown in the fifth and sixth column of Table D-7. The direct effect on output in each sector (in millions of dollars) is taken from Table D-6, and is shown in the seventh column. The lower and upper bounds of each coefficient are multiplied by the direct effect on output estimate, to get a range on the number of jobs that may be a direct effect of increased demand resulting from loans being spent in each sector. However, in the manufacturing, utilities, and the publishing sectors the coefficients between the number of jobs and economic output were negative (which was nonsensical), and the associations between the two variables generally were so weak, that the coefficients were treated as zeroes. Further, Table D-7 assumes the maximum effect, by assuming that all of the loans are made in-state, that borrowers would not get loans otherwise without the additional State deposits in in-state banks, and that all of the loan money is spent in-state. Given these assumptions, for every additional $100 million the State must deposit with in-State banks, the maximum direct effect of the loans on employment ranges from 250 to 334 jobs.

INDIRECT AND INDUCED EFFECTS

The indirect and induced effects can be estimated using input-output models of economic impacts. Input-output models are based on tables showing inter-industry relationships. These tables describe the production of commodities by industries and the uses of commodities by industries. Together these tables form the input-output table that details the intermediate industry transactions within the economy. Expanding the table to include final demand for industry output, along with employment and capital services, yields the social accounting matrix.

These tables are ultimately derived from survey data. These surveys collect information from firms about their intermediate demand for goods and services, along with information about their use of labor and capital services, their tax payments, and their sales. The Bureau of Economic Analysis (BEA) is one organization which constructs these kinds of tables.

The three most commonly-used economic input-output modeling systems are: IMPLAN, RIMS II, and REMI. The IMPLAN model was originally developed for the U.S. Forest Service, but for many years has been maintained and licensed by the Minnesota Implan Group. The RIMS system (regional input-output modeling system) is produced by the BEA of the U.S. Department of Commerce. The REMI models are produced privately and customized to user-specified geography by Regional Economic Models, Inc.

If the direct effect in output (otherwise called "final demand") of a given industry is known, then the input-output models apply a multiplier to the direct effect of each industry to estimate the indirect and induced effects. For example, Table D-8 shows the components of the multiplier for the construction industry in Virginia from the RIMS II model. To illustrate, for every dollar spent in the construction sector, there ultimately is spending for additional inputs from other sectors, so that there is a ripple effect totaling: 26.46 cents in the manufacturing sector, 14.75 cents in the real estate and rental and leasing sector, 13.55 cents in the retail trade sector, 12.09 cents in the professional, scientific, and technical services sector, and so on. The total impact of increased demand in the construction sector on Virginia output (including indirect and induced effects) is calculated by multiplying the direct effect on the construction sector by the sum of all the components shown in the rows in Table D-8.

Table D-8: Illustrative Example of Components of the Multiplier for the Construction Sector in Virginia, From RIMS II model

Aggregated Sector	Component
Agriculture. Forestry, fishing, and hunting	0.0196
Mining	0.0090
Utilities	0.0233
Construction	1.0077
Manufacturing	0.2646
Wholesale trade	0.0714
Retail trade	0.1355
Transportation and warehousing	0.0611
Information	0.0601
Finance and insurance	0.0868
Real estate and rental and leasing	0.1475
Professional, scientific, and technical services	0.1209
Management of companies and enterprises	0.0318
Administrative and waste management services	0.0423
Educational services	0.0141
Health care and social assistance	0.0851
Arts, entertainment, and recreation	0.0093
Accommodation and food services	0.0438
Other services	0.0537
TOTAL	**2.2877**

Source: Bureau of Economic Analysis, U.S. Department of Commerce, RIMS II input-output model.

Three sets of multipliers (from the IMPLAN, the RIMS II and the REMI models) were used to develop a range of estimates of the indirect and induced effects of loans due to additional State deposits with in-state banks. These three alternative sets of estimates are shown in Table D-9. The estimated indirect and induced effects on output are calculated by multiplying the estimated direct effects in output for each sector with the multiplier from each sector to get

Table D-9: Estimates of Direct, Indirect, and Induced Effects on Output and Employment of Additional $100 Million State Deposits With In-State Banks

	Direct Effects on:			Estimated Indirect and Induced Effects Based on: IMPLAN Multipliers		RIMS II Multipliers		REMI Multipliers	
Sector	Output ($ millions)	Jobs - Lower Bound	Jobs - Upper Bound	Output ($ millions)	Jobs	Output ($ millions)	Jobs	Output ($ millions)	Jobs
Banking*	$0.790	0	0	$0.508	2	$0.592	2	$0.470	2
Real Estate**	30.048	93	126	9.378	40	13.750	59	12.079	52
Retail Trade**	12.650	55	74	9.138	39	13.839	60	11.183	48
Manufacturing**	8.530	0	0	4.414	19	8.763	38	3.984	17
Construction**	4,536	42	49	3.454	15	5.841	25	2.935	13
Utilities**	2.391	0	0	0.735	3	1.664	7	0.964	4
Rental & leasing srvcs**	2.279	0	4	1.417	6	1.134	5	0.982	4
Other services, incl.** Repair and maint. Personal and laundry	1.938	18	22	1.452	6	2.027	9	1.026	4
Food service**	1.898	0	0	1.862	8	2.229	10	1.137	5
Insurance carriers etc.**	1.883	4	7	1.303	6	2.017	9	1.026	4
Professional, scientific and technical services**	1.375	7	8	1.237	5	1.424	6	0.978	4
Wholesale Trade**	1.133	2	3	0.754	3	1.100	5	0.621	3
Education**	0.622	11	13	0.529	2	0.752	3	0.522	2
Publishing**	0.498	0	0	0.335	1	0.485	2	0.333	1
Ambulatory health care and Hospitals & inst.**	0.474	3	4	0.379	2	0.563	2	0.398	2
Performing arts, etc.**	0.425	8	13	0.380	2	0.481	2	0.306	1
Accommodation**	0.401	0	0	0.291	1	0.373	2	0.240	1
Transit and ground passenger transportation**	0.357	5	9	0.248	1	0.397	2	0.211	1
Supp. act. for mining**	0.348	0	0	0.206	1	0.418	2	0.285	1
Agriculture**	0.063	0	0	0.045	0	0.068	0	0.073	0
Other**	0.316	1	1	0.219	1	0.319	1	0.207	1
TOTAL	**$72.164**	**250**	**334**	**$38.384**	**165**	**$58.237**	**251**	**$40.037**	**172**

*These estimates show the effects for every one percent difference between what banks pay to their depositors and what they earn from their loans.

** These estimates assume a loan-deposit ratio of 0.79, that 100 percent of the loans are made in-state, that 100 percent of these loans would not be made if the State did not deposit additional money with in-state banks, and that 100 percent of the loan money is spent in-state.

Source: JLARC staff analysis.

the total estimated economic impact, and then subtracting the direct effects from this estimated total economic impact. Because the indirect and induced jobs could be occurring in any and all sectors, the number of jobs was estimated using results from a regression using output from all sectors to predict the number of jobs in all sectors. On average, for every additional million dollars of output, an additional 4.30 jobs are predicted by the regression line. The association between output and number of jobs across all sectors is

quite strong (R-square = 0.99), and the error of the coefficient is relatively small (standard error = 0.13). So the coefficient of 4.30 per million dollars was multiplied by the estimated indirect and induced output to get the estimated number of jobs associated with the indirect and induced effects.

Table D-9 summarizes the maximum economic impacts that could be associated with the State depositing each additional $100 million with in-state banks. Assuming that all loans are made in-state, would not occur otherwise, and all loan money is spent in-state, estimates of total effects on economic activity (otherwise known as total output, or total final demand) range from approximately $111 million to $131 million. Likewise, estimates of total effects on employment range from 415 to 585 jobs. In Chapter 5, more realistic assumptions are made, and consequently the estimated economic impacts would be lower.

IMPACTS ON VIRGINIA GOVERNMENT REVENUES

Virginia government revenues are also strongly associated with economic output (total gross state product, or GSP) over the years. Therefore, GSP is used as a predictor of government revenues, as shown in Table D-10.

Table D-10: Virginia Government Revenues Associated With Total Change in Economic Output Due to Additional $100 Million of State Deposits With In-State Banks

	Regression Results						
	R-Square	**Coefficient (Taxes Collected Per Dollar of Output)**	**Std. Error**	**Lower Bound**	**Upper Bound**	**Revenues Assuming IMPLAN Estimate of Total Output x Lower Bound ($ million)**	**Revenues Assuming RIMS II Estimate of Total Output x Upper Bound ($ million)**
Virginia State Government							
Individual Income Tax	0.98	0.02775	0.00105	0.02569	0.02981	$2.858	$3.911
Corporate Income Tax	0.66	0.00172	0.00028	0.00117	0.00227	0.130	0.298
Sales Tax	0.98	0.00720	0.00025	0.00671	0.00769	0.746	1.009
Other General Fund Revenues	0.83	0.00488	0.00053	0.00384	0.00492	0.427	0.776
Total State Revenues						$4.162	$5.994
Local Government Revenues	0.99	0.04178	0.00095	0.03992	0.04364	$4.440	$5.725

Note: These estimates assume a loan-deposit ratio of 0.79, that 100 percent of the loans are made in-state, that 100 percent of these loans would not be made if the State did not deposit additional money with in-state banks, and that 100 percent of the loan money is spent in-state.

Source: JLARC staff analysis of data from: Bureau of Economic Analysis, U.S. Department of Commerce, "Gross Domestic Product by State;" Governor's Working Papers, *The Economic Outlook and Revenue Forecast Through Fiscal Year 2012,* Appendix B "General Fund Data," Table B.2 "Annual General Fund Revenues;" and Auditor of Public Accounts, *Comparative Report of Local Government* 1989 through 2009, Exhibit B, "Revenues."

A few details about the data from which the regressions in Table D-10 were calculated should be mentioned. The years represented in the data are generally from 1988 to 2008. The GSP data from the BEA and the State revenue data were for calendar years ending on December 31. But the data from local governments were reported on a fiscal year basis, beginning on July 1 of the previous year and ending on June 30. Therefore, GSP data from the most recently completed calendar year (for example, Calendar Year 2008) was used to predict the local revenues from each fiscal year (in this example, Fiscal Year 2009).

Banks also pay a franchise tax to the State, based on the amount they have in "net capital". It is unclear how additional State deposits would affect banks' net capital, so an effective tax rate based on banks' equity capital was calculated. (Equity capital is the base from which net capital is derived.) According to FDIC data, as of June 30, 2009, Virginia banks had approximately $56,666 million in equity capital. In Fiscal Year 2009, the State collected $22.5 million in bank franchise taxes, resulting in an effective tax rate of 22.5/56,666. A further assumption is that Virginia banks would earn an additional $790,000 for every one percent between what they earn from their loans and what they pay their depositors for every additional $100 million in State deposits with in-state banks, and that the entire $790,000 eventually becomes included in a bank's total equity capital. Then the State would collect at most an additional $314 in franchise taxes for every one percent earned on loans generated by $100 million in additional State deposits with in-state banks.

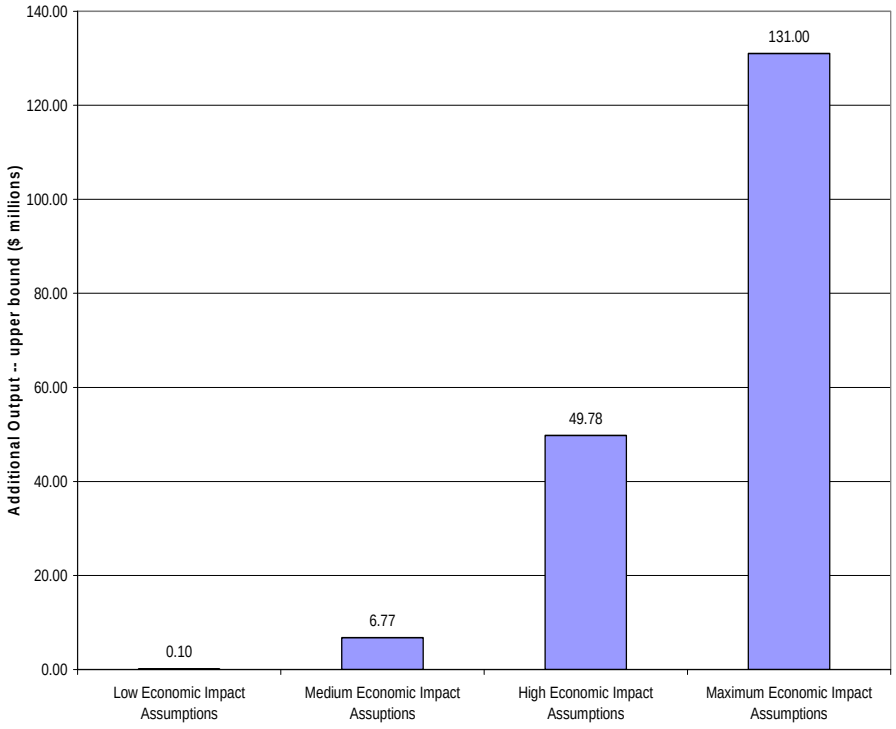
SENSITIVITY OF ECONOMIC IMPACT ESTIMATES TO KEY ASSUMPTIONS

Up to this point, the economic impacts were estimated under four assumptions that allowed for the maximum possible economic impact estimate to be calculated: (1) that the loan-to-deposit ratio was the 10-year average of 0.79 (that 21 percent of the funds would have to be reserved); (2) that 100 percent of the loans would be made to Virginians; (3) that 100 percent of the loans would not be made if the State did not deposit the additional money with in-state banks, and the Virginian borrowers would not be able to get the loan money otherwise; and (4) that 100 percent of the loan money is spent and is circulated within the Virginia economy. However, as discussed in Chapter 5, these four assumptions could be unrealistically high, so they are replaced by lower, more realistic assumptions.

These four assumptions are in combination, in that they are multiplied together. So the effects on the economic impact estimates of changing one assumption are different, depending on the values of

the other three assumptions. Further, there is a compounding effect, because all four assumptions are multiplied by each other. Figure D-4 illustrates this point. The "low economic impact" assumptions are 0.20/0.79 of the loan-to-deposit ratio (compared to the "maximum economic impact" assumption); 15 percent of the loan money goes to Virginians; 10 percent of the loan money would not be made to Virginia borrowers otherwise; and 20 percent of the loan money remains in Virginia. The result of multiplying these assumptions together is that the estimated economic impact would be 0.07595 percent of the "maximum economic impact" (Figure D-4).

Figure D-4: Estimated Economic Impact Under Different Assumptions



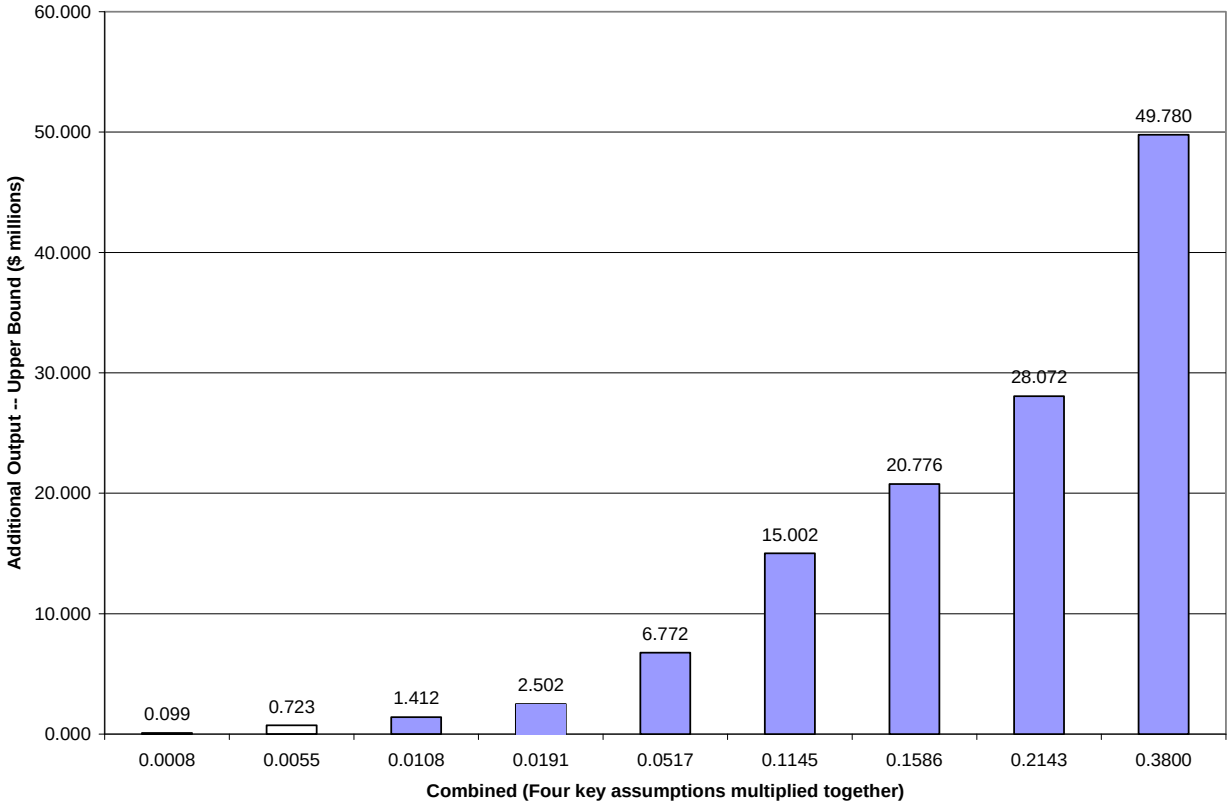
Source: JLARC staff analysis.

Even the more-realistic "high economic impact" assumptions would yield a result considerably smaller than the "maximum economic impact" assumptions, as shown in Figure D-4. The "high economic impact" assumptions are: 0.79/0.79 of the loan-to-deposit ratio; 95 percent of the loan money goes to Virginians; 50 percent of the loan money would not be made to Virginia borrowers if the State did not deposit additional money with in-state banks; and 80 percent of the loan money remains in Virginia. Multiplying these as-

sumptions together, the estimated economic impact would be 38 percent of the "maximum economic impact" (Figure D-4).

It could be argued that the "low economic impact" assumptions are too low, or that the "high economic impact" assumptions are too high. Figure D-5 shows what the alternative economic impact estimates would be if other bundles of assumptions (between the "low" and the "high economic impact" assumptions) were chosen.

Figure D-5 Economic Impact Estimates Under Different Sets of Assumptions



Values of Four Key Assumptions:
Loan-deposit ratio adjustments: .20/.79, .30/.79, .35/.79, .39/.79, .49/.79, .60/.79, .64/.79, .69/.79, .79/.79
Loans to Virginians: .15, .29, .35, .41, .55, .69, .75, .81, .95
Otherwise not get loan: .10, .17, .20, .23, .30, .37, .40, .43, .50
Loan spent in Virginia: .20, .30, .35, .40, .50, .60, .65, .70, .80

Source: JLARC staff analysis

If one wished to substitute a smaller bundle of assumptions for the "high economic impact" assumptions (or a bigger bundle of assumptions for the "low economic impact" assumptions), the corresponding economic impacts could be estimated by multiplying the "Combined" weight times the estimates generated under the "maximum economic impact" assumptions. As a more specific example, suppose that one wished to substitute for the "high economic im-

pact" assumptions the next biggest bundle of assumptions. Then the "Combined" weight would no longer be .3800, but .2143. The "maximum economic impact" estimate (such as the upper bound of additional output—$131 million) would be multiplied by .2143 (instead of .3800), resulting in $28.072 million as the "high economic impact" estimate.

Further, the economic impacts of any set of assumptions could be calculated. The "Combined" weight would be the product of the four assumptions multiplied together. (The assumed loan-deposit ratio assumption requires that an adjustment from 0.79 be made, such that this assumption is actually the new assumed value divided by 0.79.) The "Combined" weight would then be multiplied by the "maximum economic impact" estimate, resulting in an economic impact estimate that reflects the alternative assumptions.

Appendix E

Requirements and Guidelines in Other States for Placing Public Funds in In-State Banks

JLARC staff reviewed policies of other states and recommendations by national organizations regarding the investment of public funds and the issue of requiring a portion of these funds to be placed in in-state banks. In general, very few states have a statutory requirement to invest public funds in-state, though many other states have a policy or practice for investing a portion of their public funds in in-state banks. Guidance at the national level also does not appear to support statutory requirements for investing public funds in state.

The Government Finance Officers Association (GFOA) has provided some of the most extensive guidance at the national level on the investment of state and local public funds. In 1997, GFOA adopted a policy statement on state and local investment practices which came out of a recognition that, while some state and local laws may permit investments that are inappropriate for government, others may be overly restrictive with regard to permissible instruments or financial entities. As part of the policy statement, GFOA adopted a position to encourage state and local legislative bodies to remove artificial restrictions upon the efficient investment of public funds by, among other things:

> Authorizing and encouraging professional investments by removing geographical restrictions on eligible financial entities.

While much of GFOA's investment recommendations are targeted at local governments, staff at GFOA indicated that the above position applies to state governments as well.

Interviews with other state treasury departments regarding their investment policies also demonstrate that few states have statutory requirements that public funds be invested in-state, though the specific requirements and whether they are codified vary. Further, it appears that other states are not required to deposit or invest public funds specifically in local community banks.

FEW STATES HAVE A STATUTORY REQUIREMENT THAT THEIR PUBLIC FUNDS BE INVESTED IN IN-STATE BANKS, THOUGH MANY HAVE A CD PROGRAM

Based on interviews with 34 other state treasury departments, the majority of states currently have a statutory requirement that their state's public funds be deposited in in-state banks, but few states have a statutory requirement that a portion of the state's portfolios be invested in state. Most states' investments of public funds are largely in negotiable securities, such as federal government securities, and approximately 44 percent of states report that they do not invest public funds in out-of-state banks, though most only do this as a matter of practice. However, only six states—Alabama, Colorado, Mississippi, New York, North Dakota, and Washington—indicated that they have a statutory requirement that a portion of their public funds be invested in in-state banks (Table E-1). An additional six states noted that while they do not have a statutory requirement, they do have a state policy to invest their public funds in in-state banks.

As shown in the table, although the specific requirements vary across these 12 states, the one common requirement they share is that the banks must have a physical presence in the state (usually defined as having at least one retail branch located within the state as opposed to being headquartered in-state) in order to receive public funds. Only two states require banks to be headquartered in their state.

Further, states vary in whether they require a minimum or place a maximum on the proportion of the state's portfolio that is to be invested in-state. Alabama, New York, and North Dakota require a percentage ranging from 80 percent to 100 percent of their state's portfolio to be invested in in-state banks. Conversely, three states – Kansas, Tennessee, and Washington – have a cap on the percentage of their state's portfolio that may or shall be invested in in-state banks. As previously indicated, having a maximum instead of a minimum percentage requirement can give state treasurers and investment portfolio managers more flexibility in managing the diversification of the states' investments.

Other states do not require public funds to be deposited or invested specifically in local community banks.

The table also shows that states with in-state investment requirements require public funds to be invested in banks with a physical presence in their state, not "local community banks" specifically. This is true for requirements related to public deposits as well. Among the 34 state treasury departments interviewed, approximately 70 percent indicated that they have a statutory requirement to deposit public funds in banks with a physical presence in their state, though not community banks per se.

Table E-1: Only Six States Out of 34 Interviewed Have a Statutory Requirement That Their Public Funds Be Invested in Banks With a Physical Presence in Their State

State	Statutory Requirement	State Policy	Banks Must Be Head-Quartered In State	Description of Statutory Requirement or Policy Regarding States' Public Investments
Alabama	✓			20% of the state's portfolio may be invested in federal treasuries and agencies. The remaining 80% must be invested in banks with a physical presence in Alabama.
Colorado	✓		✓	Investments in Colorado banks must be made in banks that are headquartered in Colorado and have a state charter. No percentage requirement.
Illinois		✓		Investments in Illinois banks must be made in banks that have either a national charter or a state charter. If the former, the bank must have a physical presence in the state.
Kansas		✓		A maximum of 15% of the state's portfolio is invested in banks with a physical presence in Kansas.
Mississippi	✓			The treasurer is required by law to offer any new public funds to invest to banks with a physical presence in Mississippi first. No percentage requirement.
Missouri		✓		Investing in banks with a physical presence in Missouri is a primary objective. Approximately 15% of the state's portfolio is currently invested in in-state banks. No more than 10% of state funds may be invested at one bank. The treasurer has discretion as to where funds are invested but has made efforts to place public funds in banks geographically dispersed across the state.
New York	✓			100% of state funds must be invested in banks with a physical presence in New York.
North Dakota	✓		✓	The treasurer is required by law to invest all public funds in the Bank of North Dakota, a state-owned bank.
Oklahoma		✓		The state has a policy that public investments be made in banks with a physical presence in Oklahoma. Currently, almost all of their investments are in Oklahoma banks.
Rhode Island		✓		The state has a policy that public investments be made in banks with a physical presence in Rhode Island.
Tennessee		✓		A maximum of 50% of the state's portfolio is invested in banks with a physical presence in Tennessee. There is no minimum required by statute to be invested in in-state banks.
Washington	✓			The treasurer is required to offer up to 5% of general state revenue to qualified depositories with a physical presence in Washington.
Total Number of States	**6**	**6**	**2**	

Source: JLARC staff analysis of interviews with other state treasury department officials.

Most States Have a Public Funds CD Program But Few of These Programs Are Required By Statute

Twenty-six of the 34 state treasury departments interviewed reported that they have a public funds CD program (Figure E-1), which offers public funds to in-state banks to be invested in non-negotiable CDs. The statutory restrictions for some of the states listed in Table E-1 on the previous page are tied specifically to the state's public funds CD program. The remaining states with a public funds CD program do not require the programs in statute but include them as a matter of policy.

Figure E-1: Twenty-six States Out of 34 Interviewed Have a Public Funds CD Program

Source: JLARC staff analysis of interviews with other state treasury department officials.

States Vary in Their Rate-setting Process for Public Funds CD Programs. Most states' public funds CD programs are structured as an auction program in which non-negotiable CDs are auctioned off once a month (or more frequently) to in-state banks designated as qualified depositories and are based on the interest rates offered by the banks. In some cases, the state treasurer sets a floor for rates, which is typically based on federal agency securities or treasury bills. By law, several of these states indicated that they cannot set the interest rate for their CD program below what they would normally receive if public funds were invested in other securities. Some states, such as New York and North Dakota, do not

set interest rates for their CD program because they do not have a formal auction process. Instead, banks that wish to participate in their CD program contact them directly and offer their most competitive interest rate. Many other states (including Virginia) set the rate banks must pay for funds accepted through the public funds CD program.

Recently, Banks Have Not Accepted All Public Funds Offered Through Other States' CD Programs. Similar to Virginia, some of the states reported that banks have not accepted all funds offered more recently through their public funds CD programs. Several states indicated that banks did not accept all of the public funds offered primarily because they would not pay the interest rate set by the treasury department. In addition, a number of states also reported that banks have not had a strong need for the additional funds due to a decline in the demand for loans requested by qualified applicants.

Other States Did Not Express Concerns About the Safety, Liquidity, and Return of Their Public Funds CDs. Similar to Virginia, other state treasury departments reported having collateral requirements above the FDIC insured amounts for banks to receive public deposits, including non-negotiable CDs, which alleviates their concerns regarding the safety of these deposits. The majority of state treasury departments interviewed indicated that their collateral requirement is a minimum of 100 percent above the FDIC insured amount. Most states reported having a single, standard collateral percentage requirement for non-negotiable CDs. In comparison, a few other states reported having a tiered collateral system. For example, Florida's treasury department reported that their tiered collateral system ranges from 25 to 200 percent based on banks' financial health. Most other states do not accept pooled collateral due to the increased number of bank failures across the country and the negative impact a single bank failure has on a pooled collateral system. However, a few states reported that they currently have a pooled collateral system in which banks are required to participate in order to receive public funds. North Carolina is similar to Virginia in that banks have the option to participate in a pooled collateral system. North Carolina requires banks to pledge 100 percent collateral if they are in the pool or 110 percent if they opt out of the pool.

Because many state treasury departments set the maturity terms and either set or seek competitive interest rates for their public funds CDs, other states did not report concerns regarding the liquidity and rate of return of these public investments. To address liquidity concerns associated with non-negotiable CDs, state treasury departments stagger the maturity terms of the CDs. Other state treasury departments also reported that the interest rates for

non-negotiable CDs tend to compete favorably with other money market investments, and thus have typically performed well comparatively.

At Least 15 States Have a Linked Deposit Program That Places Lending Requirements on Banks That Receive Public Funds

Types of Linked Deposit Programs

Among the 15 states with a linked deposit program:

- 11 states have a program supporting business owners (large or small).
- Seven states have a program supporting agricultural businesses or farms.

Nearly one-third of states currently have at least one linked deposit program (Figure E-2) and some have more than one where the state treasurer provides public funds to banks through non-negotiable CDs at below market rates and places requirements on the banks in terms of what they can do with the public funds they receive. The general purpose of a linked deposit program is to support new or expanding businesses or farms by enabling eligible borrowers to receive low interest loans from banks. Typically, the goal of linked deposit programs around the nation is to invest in in-state businesses and agricultural operations, leading to job creation, economic expansion, and stronger communities.

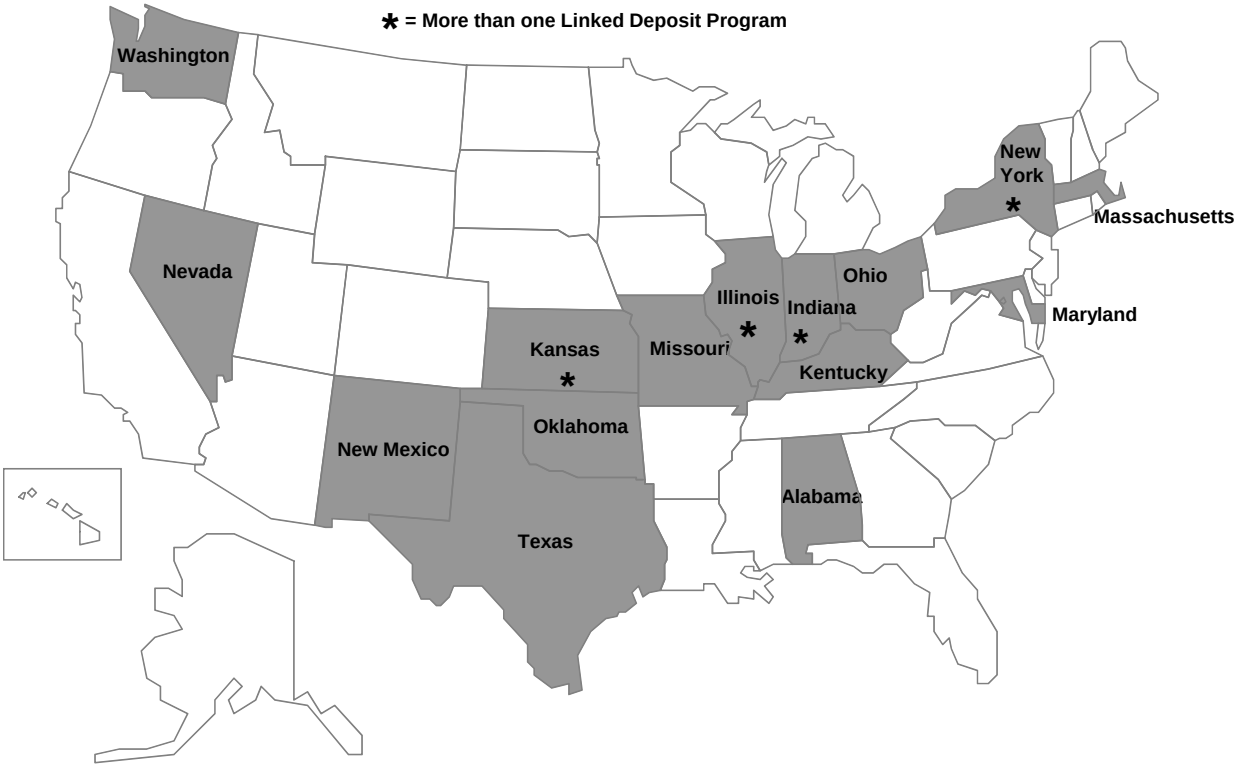
Under a linked deposit program, in-state banks are required by state treasury departments to sign agreements stating that they will lend the public funds received to local in-state businesses. For example, Illinois has three different types of linked deposit programs, each of which requires in-state banks to use the public funds received to provide loans to a specific type of business or population of individuals at a discounted interest rate.

- *Cultivate Illinois* – banks are required to offer loans at a discounted interest rate to agricultural businesses;
- *Employ Illinois* – banks are required to offer loans at a discounted interest rate to business owners (large, small, and child care); and
- *Opportunity Illinois* – banks are required to offer loans at a discounted interest rate to Illinois citizens who have disabilities, are soldiers, have experienced a natural disaster, or are low-income or under-served individuals.

Because these three types of linked deposit programs target different businesses and populations of citizens in Illinois, each program is managed by a different state department.

Of the 15 states with a linked deposit program, ten reported having both a linked deposit program and a public funds CD program, which are considered separate programs. Most state treasurers also set aside general fund money for the linked deposit programs. However, some states have additional or other funding sources for this purpose. Regardless of the funding source, the public funds are provided to banks in the form of non-negotiable CDs.

Figure E-2: At Least 15 States Have a Linked Deposit Program That Requires Banks to Use Public Funds to Offer Low Interest Rate Loans to Eligible Businesses or Individuals



Source: JLARC staff analysis of interviews with other state treasury department officials.

General Requirements and Enforcement Activities of Linked Deposit Programs Appear to be Similar Across States. Based on interviews with other state treasury departments, the general program requirements and enforcement activities of other states' linked deposit programs appear to be similar. Specifically, banks must apply to participate in their state's linked deposit program and once accepted, banks are typically required to submit monthly reports to the treasury department for all loans provided under the state's linked deposit program. These reports provide an update on the outstanding principal amount for each loan under the program and help ensure that state funds are being used properly. In addition, state treasury departments frequently track who the banks are lending public funds to as well as the collateral required for these loans, and some states perform an annual audit of the banks participating in the program. Further, if the loan is paid off prior to the maturity date, the bank is required to notify the state's treasury department. If a bank is unable to loan out the public funds

received, the bank is required to return the money to the state's treasury department.

There is some variation in the specific requirements and administration of other states' linked deposit programs. For example, Maryland requires participating banks to maintain a specific rating in order to continue participation in the program. Also, the loan approval and verification processes for the linked deposit programs in some states are handled by agencies other than the treasury department. For example, an agriculture loan would be approved and verified by the state's agriculture department. As a result of this segregation of tasks, each department may have specific income requirements to qualify for a loan. Further, the reporting requirements for some states' linked deposit programs are also administered by state departments other than treasury.

Most states with a linked deposit program have the equivalent of one full-time person dedicated to the program.

Most states with a linked deposit program reported having the equivalent of one full-time person dedicated to all program-related activities and duties. In some cases, the work related to the program is divided up among multiple individuals. Regardless of the number of staff dedicated to states' programs, several state treasury departments expressed their opinion that the linked deposit program has increased their workload because they are responsible for ensuring that banks have completed all necessary documentation and have sufficient collateral pledged for all public funds received, as well as monitoring bank participation in the program and tracking the individual loans to ensure that interest and principal are paid to the treasury departments in a timely manner.

Banks Are Able to Satisfy the Reporting Requirements of the Linked Deposit Programs. Bank requirements for linked deposit programs are typically stated specifically in states' laws, and other state treasury departments reported that banks are able to carry out the extensive reporting requirements of the programs, which include the collateral amounts posted against the state funds received, as well as the interest and principal amounts paid on the loans issued through the program. Further, most other states indicated that the requirements of their linked deposit program do not appear to limit the amount of public funds banks are willing to accept. Some states did report that banks have not accepted as much public funds more recently because they do not have a strong need for the additional funds. As a result, some programs are currently experiencing a lower demand due to a lack of lending activity in their state. Finally, if banks fail to meet the state's requirements, they are no longer eligible to participate in the program and the public funds must be sent back to the treasury department. These banks may reapply to participate in the program once they satisfy the minimum requirements.

Types of S&P Fund Ratings

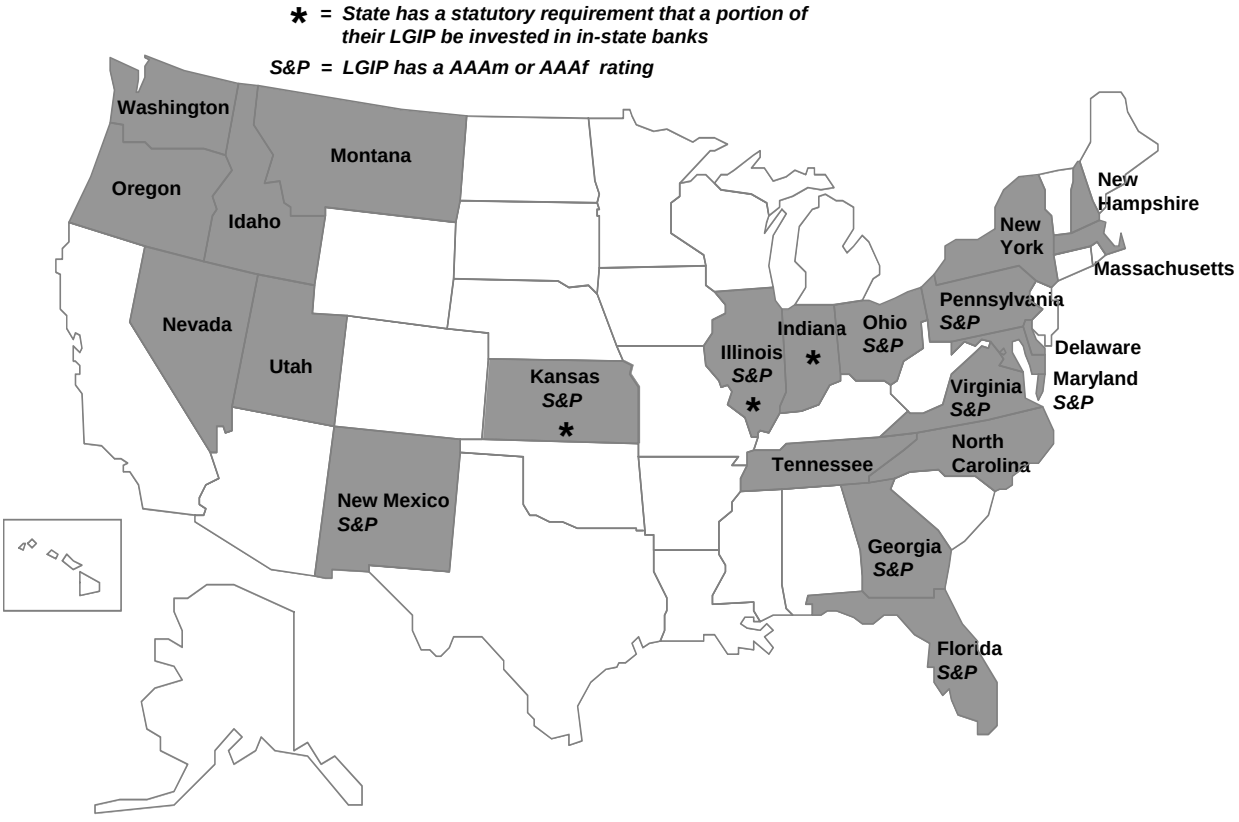
An S&P rating ending with an "m" indicates that a pool is managed as a money market fund or in a money market fund-like manner with a constant net asset value of $1.00. Virginia's LGIP has an AAAm rating.

An S&P rating ending with an "f" indicates the fund has a fluctuating net asset value.

FEW STATES REQUIRE A PORTION OF THEIR LGIP TO BE INVESTED IN IN-STATE BANKS

Many states have a local government investment pool (LGIP), but very few have a statutory requirement that a portion of their LGIP be invested in in-state banks. Among the 34 states interviewed, 22 indicated that they currently have an LGIP (Figure E-3), but only three states—Illinois, Indiana, and Kansas—reported having a statutory requirement that a portion of their LGIP be invested in in-state banks. One reason more states do not have such a requirement may be related to Standard & Poor's (S&P) criteria for LGIPs to receive and maintain an AAAm or AAAf rating. Nine of the 22 states with an LGIP reported that they currently have an AAAm or AAAf rating. Several of these states indicated that the S&P criteria indicate that no more than five percent of a portfolio to be invested in unrated banks, and some states expressed concerns that requiring a portion of their LGIP be invested in in-state banks would jeopardize their AAAm or AAAf rating.

Figure E-3: At Least 22 States Have an LGIP and Only Three States Have a Statutory Requirement That a Portion of Their LGIP Be Invested In State



Source: JLARC staff analysis of interviews with other state treasury department officials.

As Table E-2 illustrates, the specific requirements for the three states that do have a statutory requirement to invest LGIP funds in-state are notably different. First, Illinois indicated that no more than five percent of their entire LGIP portfolio may be invested in non-negotiable CDs at in-state banks, which satisfies S&P criteria and allows the fund to maintain its AAAm rating. Comparatively, Indiana requires half of its LGIP to be placed in demand deposit accounts, savings accounts, or non-negotiable CDs in in-state banks. However, Indiana's LGIP is not currently rated by S&P (nor has it been since it was created by statute in 2007), and thus does not have the same investment requirements as S&P rated investment pools. Indiana's treasury department also noted that they do not currently have any LGIP funds invested in in-state bank CDs. To satisfy the state's 50 percent statutory requirement, Indiana currently has public funds in demand deposit accounts and savings accounts in in-state banks.

Table E-2: Only Three States Have a Statutory Requirement That a Portion of Their LGIP Be Invested in In-State Banks

State	S&P Rating	Description of Statutory Requirement
Illinois	AAAm	No more than 5% of the LGIP may be invested in non-negotiable securities at unrated in-state banks.
Indiana	*Not Rated*	50% of the LGIP must be placed in demand deposit accounts, savings accounts, or non-negotiable CDs in in-state banks that have been designated as an approved depository.
Kansas	AAAf	Kansas' LGIP, Municipal Investment Pool (MIP), is managed together with the state's public funds in one combined portfolio. The current cap on investments on Kansas bank CDs is 15% of the portfolio, and deposits in any one bank may not exceed 2.5% of the portfolio.

Note: The "m" subscript in the S&P rating indicates that the pool is managed as a money market fund or in a money market fund-like manner with a constant net asset value of $1.00. The "f" subscript indicates that the fund has a fluctuating net asset value.

Source: JLARC staff analysis of interviews with other state treasury department officials.

Finally, Kansas requires localities to first allow in-state banks to bid for the local public funds before investing the money in Kansas' LGIP, the Municipal Investment Pool (MIP), which has an AAAf fund credit quality rating. The MIP is managed together with the state's public funds in one combined portfolio. Therefore, the current cap on non-negotiable CDs in Kansas banks is 15 percent of the entire portfolio, and investments in any one bank may not exceed 2.5 percent of the portfolio (as described in Table E-1). These limits were established by the state treasurer due to concerns that a higher percentage may result in the pool losing its AAAf rating. It is also important to note than neither Illinois nor Kansas has experienced a loss in their LGIP's AAAm or AAAf rating as a result of investing a limited portion of public funds in in-state banks, though both states have been careful to ensure they continue to meet S&P criteria.

Appendix F

Glossary

Asset - Any item of economic value owned by an individual or corporation, especially that which could be converted to cash. Examples are cash, securities, accounts receivable, inventory, office equipment, real estate, a car, and other property. On a balance sheet, assets are equal to the sum of liabilities, common stock, preferred stock, and retained earnings. From an accounting perspective, assets are divided into the following categories: current assets (cash and other liquid items), long-term assets (real estate, plant, equipment), prepaid and deferred assets (expenditures for future costs such as insurance, rent, interest), and intangible assets (trademarks, patents, copyrights, goodwill). *Investorwords.com*

Bank - An organization, usually a corporation, chartered by a state or federal government, which does most or all of the following: receives demand deposits and time deposits, honors instruments drawn on them, and pays interest on them; discounts notes, makes loans, and invests in securities; collects checks, drafts, and notes; certifies depositor's checks; and issues drafts and cashier's checks. *Investorwords.com*

Bank Deposit Note - Debt security issued by a bank, backed by federal deposit insurance up to $100,000 in principal and interest, and carrying an original maturity of two to five years. Deposit notes, which pay a fixed rate of interest, can be issued in book entry or certificate form. Deposit notes are marketed through brokers, have an active secondary market, and hold some appeal with investors unwilling to buy bank holding company debt. *Answers.com*

Banker's Acceptance - A short-term credit investment which is created by a non-financial firm and whose payment is guaranteed by a bank. Often used in importing and exporting, and as a money market fund investment. *Investorwords.com*

Basis Point - One hundredth of a percentage point (0.01%). Basis points are often used to measure changes in or differences between yields on fixed income securities, since these often change by very small amounts. *Investorwords.com*

Bond - A debt instrument issued for a period of more than one year with the purpose of raising capital by borrowing. The Federal

government, states, cities, corporations, and many other types of institutions sell bonds. Generally, a bond is a promise to repay the principal along with interest (coupons) on a specified date (maturity). Some bonds do not pay interest, but all bonds require a repayment of principal. When an investor buys a bond, he/she becomes a creditor of the issuer. However, the buyer does not gain any kind of ownership rights to the issuer, unlike in the case of equities. On the other hand, a bond holder has a greater claim on an issuer's income than a shareholder in the case of financial distress (this is true for all creditors). Bonds are often divided into different categories based on tax status, credit quality, issuer type, maturity and secured/unsecured (and there are several other ways to classify bonds as well). U.S. Treasury bonds are generally considered the safest unsecured bonds, since the possibility of the Treasury defaulting on payments is almost zero. The yield from a bond is made up of three components: coupon interest, capital gains and interest on interest (if a bond pays no coupon interest, the only yield will be capital gains). A bond might be sold at above or below par (the amount paid out at maturity), but the market price will approach par value as the bond approaches maturity. A riskier bond has to provide a higher payout to compensate for that additional risk. Some bonds are tax-exempt, and these are typically issued by municipal, county or state governments, whose interest payments are not subject to federal income tax, and sometimes also state or local income tax. *Investorwords.com*

Breaking the Buck - Colloquial term used to describe the situation when net asset values for a money market fund decrease below $1. *Investorwords.com*

Capital – 1) Cash or goods used to generate income either by investing in a business or a different income property. 2) The net worth of a business; that is, the amount by which its assets exceed its liabilities. 3) The money, property, and other valuables which collectively represent the wealth of an individual or business. *Investorwords.com*

Certificates of Deposit (CD) - Short- or medium-term, interest-bearing, FDIC-insured debt instrument offered by banks and savings and loans. CDs offer higher rates of return than most comparable investments, in exchange for tying up invested money for the duration of the certificate's maturity. Money removed before maturity is subject to a penalty. CDs are low risk, low return investments, and are also known as "time deposits", because the account holder has agreed to keep the money in the account for a specified amount of time, anywhere from three months to six years. *Investorwords.com*

Charter - A document, filed with a U.S. state by a corporation's founders, describing the purpose, place of business, and other details of a corporation. Also called articles of incorporation. *Investorwords.com*

Collateralized - To secure a financial instrument, such as a loan, with an asset, such as a security or home. *Investorwords.com*

Commercial Bank - An institution which accepts deposits, makes business loans, and offers related services. Commercial banks also allow for a variety of deposit accounts, such as checking, savings, and time deposit. These institutions are run to make a profit and owned by a group of individuals, yet some may be members of the Federal Reserve System. While commercial banks offer services to individuals, they are primarily concerned with receiving deposits and lending to businesses. *Investorwords.com*

Commercial Paper (CP) - Promissory note (issued by financial institutions or large firms) with very-short to short maturity period (usually, 2 to 30 days, and not more than 270 days), and secured only by the reputation of the issuer. Rated, bought, sold, and traded like other negotiable instruments, commercial paper is a popular means of raising cash, and is offered generally at a discount instead of on interest bearing basis. Also called paper. *BusinessDirectory.com*

Community Bankers Bank – A bank organized solely to do business with other financial institutions. It is owned exclusively by financial institutions and does not conduct business with the general public. *Community Bankers Bank, What is a Bankers Bank? (website)*

Core Deposits - Banking deposits made by customers in the bank's general market area. A bank considers its core deposits to be a reliable source of funding, since customers in its general market area tend to be loyal and consistent. For example, a business owner who deposits checks at a local bank is less likely to alter his or her depositing habits based on general economic changes, such as interest rate fluctuations. Also called primary deposits. *Investorwords.com*

Corporate Note - Corporate notes are a direct, unsecured investment in the debt of a corporation, and so are not FDIC-insured. Unlike short-term bond funds or money market mutual funds, they are not diversified pools of investments. Because they are a form of unsecured credit, investors are treated as an unsecured creditor in the event of a default. *GE Interest Plus.com*

Credit – 1) A contractual agreement in which a borrower receives something of value now and agrees to repay the lender at some later date. When a consumer purchases something using a credit card, they are buying on credit (receiving the item at that time, and paying back the credit card company month by month). Any time when an individual finances something with a loan (such as an automobile or a house), they are using credit in that situation as well. 2) The borrowing capacity of an individual or company. 3) Tax credit. *Investorwords.com*

Credit Market – 1) The broad market for companies looking to raise funds through debt issuance. The credit market encompasses both investment-grade bonds and junk bonds, as well as short-term commercial paper. 2) The market for debt offerings as seen by investors of bonds, notes and securitized obligations such as mortgage pools and collateralized debt obligations (CDOs).

The credit markets dwarf the equity markets in terms of dollar value. As such, the current state of the credit markets tells us the relative health of a large portion of the financial community if we examine the prevailing interest rates and look at investor demand for various grades of credit - from "riskless" (as in Treasury Bonds) to junk bonds that carry high default risks. More demand from investors will lead to more issuance by companies and lenders, the effects of which will spill over into the equity markets. *Investopedia.com*

Credit Quality - A measurement of a bond issuer's ability to pay interest on the bond in a timely manner. The lower the credit quality of an issuer, the higher the risk that investors will not receive the stated interest rate, and the greater the risk of default on the principal. Credit quality is measured by a credit rating. *Investorwords.com*

Credit Risk - The possibility that a bond issuer will default, by failing to repay principal and interest in a timely manner. Bonds issued by the federal government, for the most part, are immune from default (if the government needs money it can print more). Bonds issued by corporations are more likely to be defaulted on, since companies often go bankrupt. Municipalities occasionally default as well, although it is much less common. Also called default risk. *Investorwords.com*

Credit Security - A financial security in which an entity, such as a government, bank, or corporation, borrows funds from an investor and agrees to pay the investor back at a later date with interest. Examples of credit securities include bonds, negotiable CDs, commercial paper, and corporate notes. *Investorword.com definition of credit, Cantor Fitzgerald, Dept. of Treasury.*

Credit Union - A non-profit financial institution that is owned and operated entirely by its members. Credit unions provide financial services for their members, including savings and lending. Large organizations and companies may organize credit unions for their members and employees, respectively. To join a credit union, a person must ordinarily belong to a participating organization, such as a college alumni association or labor union. When a person deposits money in a credit union, he/she becomes a member of the union because the deposit is considered partial ownership in the credit union.

Debt - An amount owed to a person or organization for funds borrowed. Debt can be represented by a loan note, bond, mortgage or other form stating repayment terms and, if applicable, interest requirements. These different forms all imply intent to pay back an amount owed by a specific date, which is set forth in the repayment terms. *Investorwords.com*

Debt Security - Any debt instrument that can be bought or sold between two parties and has basic terms defined, such as notional amount (amount borrowed), interest rate and maturity/renewal date. Debt securities include government bonds, corporate bonds, CDs, municipal bonds, preferred stock, collateralized securities (such as CDOs, CMOs, GNMAs) and zero-coupon securities.

The interest rate on a debt security is largely determined by the perceived repayment ability of the borrower; higher risks of payment default almost always lead to higher interest rates to borrow capital. Also known as "fixed-income securities."

Most debt securities are traded over-the-counter, with much of the trading now conducted electronically. The total dollar value of trades conducted daily in the debt markets is much larger than that of stocks, as debt securities are held by many large institutional investors as well as governments and non-profit organizations.

Debt securities on the whole are safer investments than equity securities, but riskier than cash. Debt securities get their measure of safety by having a principal amount that is returned to the lender at the maturity date or upon the sale of the security. They are typically classified and grouped by their level of default risk, the type of issuer and income payment cycles. *Investopedia.com*

Effective Tax Rate - Actual income tax paid divided by net taxable income before taxes, expressed as a percentage. *Investopedia.com*

Equity Capital – Capital raised from owners. *Investorwords.com*

Escrow – 1) Documents, real estate, money, or securities deposited with a neutral third party (the escrow agent) to be delivered upon fulfillment of certain conditions, as established in a written agreement. 2) An account held by the lender into which a homeowner pays money for taxes and insurance. *Investorwords.com*

Fixed Income Instruments - Bonds, preferred stock, and treasury bills that generate a specified amount of income over a certain period. They give their holders a fixed claim on the assets of the issuer, and are considered low-risk and low-yield investments. also called fixed income securities. *Investorwords.com*

Holding Company - A company that owns enough voting stock in another firm to control management and operations by influencing or electing its board of directors. also called parent company. *Investorwords.com*

Investment Bank - An individual or institution which acts as an underwriter or agent for corporations and municipalities issuing securities. Most also maintain broker/dealer operations, maintain markets for previously issued securities, and offer advisory services to investors. Investment banks also have a large role in facilitating mergers and acquisitions, private equity placements and corporate restructuring. Unlike traditional banks, investment banks do not accept deposits from and provide loans to individuals. Also called investment banker. *Investorwords.com*

Interest Rate Risk – The risk that changes in interest rates of debt investments will adversely affect the fair values of an investment. *LGIP Financial Statement.*

Liquidity - The ability of an asset to be converted into cash quickly and without any price discount. *Investorwords.com*

Liquidity Risk - The risk that arises from the difficulty of selling an asset. An investment may sometimes need to be sold quickly. Unfortunately, an insufficient secondary market may prevent the liquidation or limit the funds that can be generated from the asset. Some assets are highly liquid and have low liquidity risk (such as stock of a publicly traded company), while other assets are highly illiquid and have high liquidity risk (such as a house). *Investorwords.com*

Loan Loss Provision - An expense set aside as an allowance for bad loans (customer defaults, or terms of a loan have to be renegotiated, etc). Also know as a "valuation allowance" or "valuation reserve". *Investopedia.com*

London Inter-Bank Offer Rate (LIBOR). The interest rate that the largest international banks charge each other for loans (usually in Eurodollars). *Investorwords.com*

Mark-to-Market. Recording the price or value of a security, portfolio, or account on a daily basis, to calculate profits and losses or to confirm that margin requirements are being met. *Investorwords.com*

Market Risk - Risk which is common to an entire class of assets or liabilities. The value of investments may decline over a given time period simply because of economic changes or other events that impact large portions of the market. Asset allocation and diversification can protect against market risk because different portions of the market tend to underperform at different times. Also called systematic risk. *Investorwords.com*

Money Market - Market for short-term debt securities, such as banker's acceptances, commercial paper, repos, negotiable certificates of deposit, and Treasury Bills with a maturity of one year or less and often 30 days or less. Money market securities are generally very safe investments which return a relatively low interest rate that is most appropriate for temporary cash storage or short-term time horizons. Bid and ask spreads are relatively small due to the large size and high liquidity of the market. *Investorwords.com*

Money Market Account - A savings account which shares some of the characteristics of a money market fund. Like other savings accounts, money market accounts are insured by the Federal government. Money market accounts offer many of the same services as checking accounts although transactions may be somewhat more limited. These accounts are usually managed by banks or brokerages, and can be a convenient place to store money that is to be used for upcoming investments or has been received from the sale of recent investments. They are very safe and highly liquid investments, but offer a lower interest rate than most other investments. *Investorwords.com*

Money Market Fund - An open-end mutual fund which invests only in money markets. These funds invest in short term (one day to one year) debt obligations such as Treasury bills, certificates of deposit, and commercial paper. The main goal is the preservation of principal, accompanied by modest dividends. The fund's Net Asset Value remains a constant $1 per share to simplify accounting, but the interest rate does fluctuate. Money market funds are very liquid investments, and therefore are often used by financial institutions to store money that is not currently invested. Unlike bank accounts and money market accounts, most deposits are not FDIC

insured, but the risk is extremely low (only those funds administered by banks are FDIC-insured, but some others are privately insured). Although money market mutual funds are among the safest types of mutual funds, it still is possible for money market funds to fail, but it is unlikely. In fact, the biggest risk involved in investing in money market funds is the risk that inflation will outpace the funds' returns, thereby eroding the purchasing power of the investor's money. Also called money fund. *Investorwords.com*

Municipal Bond - A debt security issued by a state, municipality or county to finance its capital expenditures. Municipal bonds are exempt from federal taxes and from most state and local taxes, especially if the investor lives in the state in which the bond is issued. Municipal bonds may be used to fund expenditures such as the construction of highways, bridges or schools. "Also known as a "muni", munis are bought for their favorable tax implications and are popular with people in high income tax brackets. *Investopedia.com*

Negotiable Certificate of Deposit - A CD with a very large denomination, usually $1 million or more. They have maturities ranging from three months to six years and are usually bought by institutional investors who are interested in low-risk investments.. Negotiable CDs are usually in bearer form, and have secondary markets that are highly liquid. They are also call jumbo CDs. *Investorwords.com*

Net Asset Value (NAV) - The dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of shares outstanding. Calculated at the end of each business day. *Investorwords.com*

Non-negotiable instrument - Document of title or a financial instrument that may not be transferred from the holder or named party to another. *Business Dictionary.com*

Note - A short-term debt security, usually with a maturity of five years or less. *Investorwords.com*

Obligation - Any debt, written promise, or duty. *Investorwords.com*

Repurchase Agreement - A contract in which the seller of securities, such as Treasury Bills, agrees to buy them back at a specified time and price. Also called repo or buyback. *Investorwods.com*

Savings and Loan- A federally or state chartered financial institution that takes deposits from individuals, funds mortgages, and pays dividends. *Investorwords.*

Savings Bank - A banking association which accepts customer deposits and funds mortgages. *Investorwords.*

Security - An investment instrument, other than an insurance policy or fixed annuity, issued by a corporation, government, or other organization which offers evidence of debt or equity. The official definition, from the Securities Exchange Act of 1934, is: "Any note, stock, treasury stock, bond, debenture, certificate of interest or participation in any profit-sharing agreement or in any oil, gas, or other mineral royalty or lease, any collateral trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit, for a security, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any instrument commonly known as a 'security'; or any certificate of interest or participation in, temporary or interim certificate for, receipt for, or warrant or right to subscribe to or purchase, any of the foregoing; but shall not include currency or any note, draft, bill of exchange, or banker's acceptance which has a maturity at the time of issuance of not exceeding nine months, exclusive of days of grace, or any renewal thereof the maturity of which is likewise limited." *Investorwords.com*

Thrift - An organization formed for the purpose of holding deposits for individuals; examples include savings banks and savings and loans. *Investorwords.com*

Time Deposit - Savings account or CD held in a financial institution, usually a bank, for a fixed term or with the understanding that the customer can withdraw only by giving advanced notice. *Investorwords.com*

Treasury Bill - A negotiable debt obligation issued by the U.S. government and backed by its full faith and credit, having a maturity of one year or less. Treasury bills are exempt from state and local taxes. They are also referred to as a Bill or T-Bill or U.S. Treasury Bill. *Investorwords.com*

Treasury Bond - A negotiable, coupon-bearing debt obligation issued by the U.S. government and backed by its full faith and credit, having a maturity of more than 7 years. Interest is paid semi-annually. Treasury bonds are exempt from state and local taxes. These securities have the longest maturity of any bond issued by the U.S. Treasury, from 10 to 30 years. The 30-year bond is also called the "long bond." Denominations range from $1000 to $1 million. Treasury bonds pay interest every 6 months at a fixed coupon

rate. These bonds are not callable, but some older Treasury bonds available on the secondary market are callable within five years of the maturity date. They are also called a U.S. Treasury bond or T-bond. *Investorwords.com*

U.S. Government Agency Security - A security, usually a bond, issued by a U.S. government-sponsored agency. The offerings of these agencies are backed by the government, but not guaranteed by the government since the agencies are private entities. Such agencies have been set up in order to allow certain groups of people to access low cost financing e.g. students and home buyers. Some prominent issuers of agency securities are Student Loan Marketing Association (Sallie Mae), Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac). Agency securities are usually exempt from state and local taxes, but not federal tax. Also called 'agency security'. *Investorwords.com*

Weighted Average Maturity (WAM) - The average time it takes for securities in a portfolio to mature, weighted in proportion to the dollar amount that is invested in the portfolio. Weighted average maturity measures the sensitivity of fixed-income portfolios to interest rate changes. Portfolios with longer WAMs are more sensitive to changes in interest rates because the longer a bond is held, the greater the opportunity for interest rates to move up or down and affect the performance of the bonds in the portfolio. If interest rates move up, the value of a bond decreases because there are bonds in the market that now pay more interest and therefore are more attractive. *Yourdictionary.com*

Appendix G

Agency Response

As a part of the extensive validation process, State agencies and other entities involved in a JLARC assessment are given the opportunity to comment on an exposure draft of the report. Appropriate technical corrections resulting from comments provided by these entities have been made in this version of the report. This appendix includes a written response from the Department of the Treasury.

COMMONWEALTH of VIRGINIA

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July 6, 2010

Mr. Philip A. Leone
Director
Joint Legislative Audit and Review Commission
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Leone:

Thank you for the opportunity to comment on the Joint Legislative Audit Review Commission (JLARC) report, *Placing More Treasury-Managed Funds in Virginia Banks*. We have reviewed the exposure draft and provided clarifying comments to your staff.

I appreciate the thoroughness and professionalism of the JLARC team, led by Kimberly Sarte, in the preparation of a well-researched and documented report. Staff particularly should be commended for navigating the steep learning curve to understand the Department of the Treasury's (Treasury) statutory requirements for administration of public deposits throughout the Commonwealth and Treasury's fiduciary responsibility as it relates to the management of the Commonwealth's cash flow needs and the prudent investment of state funds.

As noted in the report, Treasury currently offers to place up to $170 million annually in Virginia banks in six month non-negotiable certificates of deposit. If the General Assembly wishes to expand such a program for the Primary Liquidity Portfolio, Treasury agrees with the report's finding that it should be in the context of a "linked deposit" program whereby such time deposits are specifically "linked" by community banks to loans for economic development. Such a program would, however, require additional administrative resources in Treasury to implement and monitor its effectiveness.

In addition, Treasury would recommend that any requirement to place additional state funds in non-negotiable certificates of deposit be codified. In the absence of such a statutory requirement, such deposits may not always meet the test of the prudent person mandate of fiduciary responsibility (§ 2.2-4514) and liquidity (§2.2-1806). This is especially true since the

report makes a persuasive case that the benefits of expanding such a program may cost the state more in lost investment revenue than it would provide in terms of economic development.

Finally, Treasury concurs with the findings that a mandate to require a certain percentage of Local Government Investment Pool (LGIP) funds into demand or time deposits could jeopardize its valued AAAm rating. Such a mandate would also be difficult to administer.

Again, we appreciate the opportunity to work with your staff on this critical study and look forward to assisting the General Assembly in any options it may wish to pursue.

Sincerely,

Manju S. Ganeriwala

MSG/kbs

cc: The Honorable Richard D. Brown

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