CHAPTER FOUR

Managing Money: Investment Products and Strategy

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Introduction

As more emphasis is put on low cost, self-sufficient SRF loan programs, it becomes increasingly important to make the most efficient use of any funds available to the SRF. All SRF programs receive federal grants which must be matched and the matching dollars, if available, can be invested prior to making loans. Some SRF programs leverage these funds by issuing bonds and creating additional monies to be invested, either prior to making loans or set-aside in reserves as security for the bonds. Once loans are originated and funded, borrowers make loan repayments back to the SRF that also need to be appropriately invested to best facilitate program objectives.

The impact of growing SRF loan portfolios results in substantial increases in fund balances. EPA's latest report on the progress of the Clean Water SRF[1] indicates that as of June 30, 2001, $37. 7 billion was available nation-wide, for SRF lending, while loan assistance provided to that date was $34. 4 billion. The financial dimension of this program illustrates the importance of putting unobligated funds to work, often in short term investments, to enhance the individual state funds. In addition, EPA's numbers also show over $4. 2 billion invested as SRF bond reserves; longer term investments with substantially higher earnings, that pay the debt service on the bonds as well as assist in subsidizing state lending rates to SRF borrowers. Or consider returns on principal and interest from SRF lending. In 2001, net payments[2] back to the states on outstanding SRF loans for both the Clean Water and Drinking Water SRFs, totaled nearly $1. 4 billion. This is money parked temporarily in state loan funds, with earning capacity from short-term investment. The point here is to stress the growing dimension of the SRF program and the very substantial amount of dollars involved, for which good investment and money management decisions become strategic considerations for SRF managers.

Whether or not an SRF program leverages its grant funds, SRF fund managers need to understand the options available to them for safely investing these funds. Prudent investment of available cash can make more funds available for programmatic purposes while preserving the principal for future loans. Even if by statute, the state treasurer or other entity is solely responsible for SRF investments, it is important that SRF staff understand investment strategies. A working knowledge of investment constraints and options will allow the SRF managers to provide critical information to Treasury staff and will facilitate good working arrangements that can maximize efficient use of SRF funds.

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[1] Progress Report of the Clean Water and Drinking Water SRF Programs, prepared for the CIFA Annual Workshop, Louisville, KY 2001.

[2] Net of P and I earnings pledged to debt repayment from SRF related bonds.

This chapter describes the basic issues confronting SRF programs for investing their funds, the risks that need to be addressed and investment products available to meet these objectives.

Sources of Invested Funds

As referenced above, there are five types of SRF funds that may need to be invested for shorter or longer time periods:

1. funds temporarily available from state match;
2. funds used to make loans or disbursements for construction projects;
3. funds used for operations or administration of SRF programs;
4. funds collected from borrowers from loan repayments or prepayments; and
5. funds set aside in leveraged programs for debt service reserves.

Appropriate investment of these funds requires a clear understanding of use, and use restrictions, investment time frames, and need for flexibility to access particular funds. Different sources of funds require different investment strategies. *Operating funds,* because of the need to pay regular SRF operating costs must be the most liquid, available on a regular and frequent basis. *Construction funds* or *loan disbursements* must be available to meet projected construction schedules. In some cases, when projects are in the early stages of design or contractors have not yet been selected, the need for drawdowns is minor. On the other hand, when projects are fully underway, large cash disbursements will be needed on a timely basis, to pay contractors for the bulk of their completed work. *Net loan repayments* may be invested prior to being reloaned and SRF managers will have a fair idea of when these loan funds will be needed and thus, the potential investment horizon. Cash set aside for debt service or reserves has a more definitive use schedule and usually a longer-term time frame, which requires an investment choice with these parameters in mind.

Primary Considerations for SRF Investments

The process of determining appropriate investments for SRF funds does not differ from the process used to determine any investment choice. The same set of considerations should apply. The primary investment objective is to maximize earnings while providing for the safety of the invested funds. Another important objective is to provide adequate flexibility to access funds when needed. A clear understanding of program cash flows is an essential prerequisite for effectively meeting all of these investment objectives, whatever the chosen investment option.

Safety and Security. The primary objective in investing public funds is to provide for safety and security of invested funds. SRF staff has a fiduciary responsibility to minimize risk to the principal amount invested. Risk that the issuer of the investment defaults and is unable to return any portion of the original cash invested is called *credit risk.* For the most part, this is not a major concern for most public investment. SRFs are not going to be investing in “pork bellies” or the initial offering of some heavily flacked, but untested technology company. By definition, the investment options open to public fund managers are reasonably safe, free from major credit risk, which is not to say that the value of a “safe” investment will not fluctuate, depending on the exigencies of the bond market and its effect on U.S. Securities. This, however, is not credit risk per se, but the inherent risk of the market, a chance that a term bond investment might have to be cashed prior to maturity, thus risking exposure to a market devaluation. Consequently, the need to "time your investments" to meet anticipated cash flow (as described below) is of major importance.

Most SRFs, like other government entities, are limited by state statutes, investment criteria, internal policies and bank trust indentures, to investing in high quality, high investment grade fixed income securities or other low-risk investments that limit credit risk. The SRF enabling laws limit investments generally to interest bearing obligations. But staff will need to remain sensitive to credit risk within these general permitted investment criteria (see "Legal and Regulatory Influences," below).

Investment horizon or investment term. Since interest rates generally increase the longer funds are invested, and since there can be a penalty for withdrawing funds before the end of the investment period, accurate information about fund usage is critical to efficient investment. Very simply, cash from various sources should be invested based on the *cash needs* of the program. As an SRF grows and becomes more complex, matching funds for investment with cash needs can be a challenging task. Programs may err on the side of being too conservative; including carrying excessive uninvested cash reserves on the books; safe but no service to the long run financial viability of the program.

The more accurately the *cash flow schedule* can be projected, the more efficiently investment choices can be made. Even if another entity such as the state treasurer is the investing authority, SRF staff is the primary source for critical cash flow information. The period from the present to the furthest point in time that the funds can be invested based on projected cash needs is sometimes referred to as the investment horizon, the period during which the investment is made. Only the SRF program manager has this knowledge.

Flexibility and liquidity. The first consideration is to determine as accurately as possible the timing in which cash is needed. This will help determine the investment horizon, or the term or time period that cash can be invested. Even with carefully prepared cash flows, however, there may be occasions when decisions on project funding, construction schedules, or other factors disrupt planned cash flows. There may be occasions when funds must be accessed sooner than planned. The need to access funds *sooner* than planned is called *market risk*, since if the investment must be liquidated in a higher interest rate environment, there may be a resulting loss of principal, or original cash investment. To avoid market risk when cash flows are uncertain, investments should be structured to provide the ability to access funds earlier that planned without loss of principal value.

Conversely, invested funds not used as rapidly as originally assumed, create a mismatch of investment horizon and investment term. The likelihood that cash is needed *later* than originally anticipated, so that the funds may need to be reinvested in a lower interest rate environment, is called *reinvestment risk*. An investment plan should consider the capacity to maximize returns from these funds, beyond the term of the investment, until they are actually needed.

The perfect investment strategy would, of course, provide absolute security for the principal, allow complete flexibility in timing the end of the investment, and provide a high rate of return. However, since there is no perfect investment instrument, the investment challenge is to weigh and balance these competing objectives in a way that best reflects the constraints, uncertainties, and risk tolerance of your particular SRF program.

To summarize, the three risks associated with protecting investment of SRF funds are:

1. Credit risk, the risk that the entity which holds the invested funds defaults, with the consequent loss of the original invested cash;
2. Market risk, the risk that the invested proceeds will be needed by the SRF program *sooner* than expected, requiring the investment to be liquidated or sold in a higher interest rate environment, resulting in a loss of principal, or original cash investment; and
3. Reinvestment risk, the risk that funds will not be needed as soon as planned, and consequently the return will be lowered for the subsequent time the funds are invested. Rather than risking principal, reinvestment risk relates to not prudently maximizing returns and thus having less funding available to carry out SRF programmatic objectives.

Legal and Regulatory Influences

In addition to risk considerations, there are several levels of federal, state, and other requirements that must be met in an SRF investment program.

Federal Requirements. The federal Clean Water and Safe Drinking Water Acts provide overall context for SRF investments. Sections (603) (d) (6) of the Clean Water Act and 1452 (f) (4) of the Safe Drinking Water Act permit monies in the fund to be invested in interest bearing obligations. Clearly, this is an indication that the drafters of the legislation envisioned the opportunity and the necessity for the SRF to be managed in a dynamic way; one of the major financial innovations of the legislation. On the other hand, it was also recognized that some state managers, perhaps excessively intent on making gains through their investment portfolio, might be inclined to hold on to funds rather than aggressively make loans. Anticipating this possibility, they added Section 602 (b) (4) of the Clean Water Act requiring that all funds in the fund will be *expended* in an expeditious and timely manner. In addition, federal tax law and regulations establish restrictions on earnings of debt service reserves created in leveraged SRF programs. Bond counsel should be expected to provide guidance to assure that these IRS requirements are met. (See Chapter 5 discussion of tax treatment of SRF bonds and arbitrage limitations on investment earnings.)

State and Programmatic Requirements. Typically, there are three additional areas of jurisdiction for determining permitted investments for SRF funds.

1. Many times, *state statute* dictates permitted SRF investment options. Other times, the investment criteria will default to the criteria established by state governments for any public fund investing. This would be the case in instances when SRF funds are managed by the state treasurer who invests other state funds, often in so called "state investment pools. " For the SRF manager, these state pool arrangements have both advantages and disadvantages. The sheer size of the combined total state investment portfolio may provide market advantages that would not otherwise be available to the SRF program and its more modest size of investments. Likewise, the fact that these are major state investing mechanisms suggests that they are managed with the expertise of experienced professionals, constantly

participating in the investment market. Few SRFs have this in-house financial management capability. On the other hand, it is possible that the investment objectives and management style of the state pool, may not be especially well matched to the needs of the SRF for both cash flow and longer term investing of bond reserves. For example, many state pools are basically overnight accounts and do not factor investment horizon into their strategy. In fact, bond indentures, which require individually designed investment structures for each bond issue, may preclude the use of a more generally designed state investment pool.

2. Some SRF programs develop their own *investment policies* to dictate specific investment vehicles permitted and appropriate for public funds of this nature (see Appendix K Colorado State Investment Policy). These policies may also describe the style of investment or judgment that should be used when making investment choices. Regardless of specific rules and restrictions in any investment policy, there will usually be a level of discretion to determine which investments, which term of investment and timing of when to invest, that will result in a particular style or comfort level for the investor on the risk and return scale. In this context, a manager of a fund needs to consider how best to build in a financial management component. Do they build the expertise in-house, or retain financial advisory services, and what is the most efficient and cost-effective option for their particular program? Much, of course, depends on the size and complexity of the individual SRF program, but even the larger and more sophisticated programs rely, to some extent, on outside expertise in directing and structuring their investments. In most cases it is just too costly to build and maintain that kind of staff capability within the program.

3. Bond proceeds and non-bond proceeds (i.e., government monies) deposited in overfunded debit service reserves, are subject to further restrictions. SRF programs that leverage funds through the issuance of bonds, receive bond proceeds from the state for state match funds, or structure their programs by making loans to local municipalities through the purchase of bonds, will generally be limited in investment options. The bond trust indenture under these programs will also limit the types of investments permitted both to protect the funds from investment loss and/or to maintain the tax-exempt status of bonds. In addition the investments permitted by the bond trust indenture must satisfy rating agency requirements. In fact, ratings assigned by each of the rating services to SRF bond financings, are dependent on the maintenance of investment quality at levels that support the ratings on the bonds. As most SRF programs, which rely on bonding to leverage their federal grant and state match dollars, enjoy Aaa/AAA ratings, this amounts to the highest investment standard practicable.

Note that all and any investment restrictions to which SRF funds are subject must be met. If, for example, long-term securities are permitted under the governing state statute or state investment criteria, but the same investment security is limited to terms of five years or less by the bond trust indenture, the more restrictive choice will apply in order for the SRF program to meet all governing rules, including rating agency requirements.

Permitted investments may also depend upon the permitted uses by the source of funds. Programmatic (operating) funds or bond trust indentures that provide bond proceeds for SRF uses may prescribe how specific funds can be used. These requirements can dictate investments that assure liquidity so that the funds will be available when needed for their restricted use. The types of investment vehicles that can be used for investing long-term debt service reserve funds (and shorter term project funds) may also become more defined by the credit rating agencies to ensure that bondholders will be secure in their investment in a particular bond issue.

Investment Products

Once the SRF program manager understands cash flow needs, and combines that information with an understanding of investment risks and permissible investment vehicles, the next step is to become familiar with available investment products and determine each product's effectiveness in meeting income objectives and ability to mitigate or eliminate investment risks.

While states and SRF programs will differ in the permitted criteria for SRF fund investments, typical investment products can be described in three very basic categories. These three categories will likely cover the bulk of investment choices that are available for most public funds.

1. *Non-customized products*: investment pools or bank certificates of deposit. Money market-type pools offer liquidity and eliminate market risk if funds are needed unexpectedly and/or cash flow has not been well planned. Pool investment funds are widely available, either through the state treasurer or private entities. When selecting an investment pool care must be taken to ensure that the pool investments are consistent with permitted SRF investments.

   With no stated maturity, the pools cannot adequately match the term of the investment horizon and there is no locked-in yield to protect against reinvestment risk. For that reason, these types of investments are typically used for the operating expenses of the SRF. Pools, however, do mitigate credit risk by investing, at least a majority of the funds, in a diversity of high quality government securities. Because they are principally short-term investments, the yields on these non-customized products are typically low. Pools may, however, be suited for short-term investments where there is considerable uncertainty about cash flows.

   Bank CDs have a stated maturity which may match investment horizons and carry no market risk if carried to maturity, but draws prior to maturity incur withdrawal penalties, leaving the investor with market risk. Bank CDs are also subject to credit risk of the issuing bank, unless amounts of investment are under $100,000, in which case they are protected by FDIC insurance.

Comparison of Investment Product Alternatives

Investment Alternatives	Liquidity/ Stability of Principal (Market Risk)	Horizon Matching (Reinvestment Risk)	Diversification (Credit Risk)	Yield (as of Oct. 2002)	Customization of Terms	Residual Risk
Bank CD	Liquidity with market risk	Limited	Bank credit risk (after $100,000)	6 month 1.62% 12 month 1.80%	Limited	M, R, C
Investment Pool	No market risk	No maturity	Limited; high quality investments in pool	Wisc State Pool Aug. 2002 1.73%	None	R, C
Bond Portfolio	Liquidity with market risk	Initial portfolio can be matched	Negligible; high quality government securities	2 yr maturity 1.9% 20 yr maturity 5.25%	Limitied; intial purchase only	M, R
Investment Agreement (GIC)	No market risk	Fully flexible to match term	Subject to Provider credit quality	2 yr maturity 1.5% 20 yr maturity 4.85%	Fully	C
Forward Delivery Agreement ?	No market risk	Fully flexible to match term	Subject to Provider credit quality for interest; government securities for principal	20 yr agreement 5.08%	Fully	C

M = Market Risk
R = Reinvestment Risk
C = Credit Risk

2. *Treasury and other Government Agency Securities*. [3] Virtually all investment criteria will allow investments in U. S. Treasury Securities and most permit government agency securities which are usually rated Triple-A and have the full faith and credit of the particular agency (Federal National Mortgage Corporation, "Fannie Mae", Federal Home Loan Mortgage Corporation, "Freddie Mac") or the full faith and credit of the U.S. Treasury (Government National Mortgage Corporation, "Ginnie Mae"). Often it is easier to match specific investment time frames with agency securities than with U.S. Treasuries. Agency and Treasury securities are available for relatively small investments through a bid process. The SRF investment manager or financial advisor will specify general parameters such as dollar value, maturity and minimum call date and select a security based on interest rate and best match to timing considerations.

A special type of U. S. Treasury obligation, *State and Local Government Series* **securities or SLGS**, are usually available to SRFs and other issuers of tax-exempt bonds. These securities can be used in two ways to invest portions of debt service reserves. First, SLGS can be used in the interim between the time other investments mature and the payment withdrawal dates, to avoid dead time or reinvestment risk. Second, SLGS can be used to meet IRS yield restrictions.

State statute investment policies may restrict the maturity terms of Treasuries and government agency securities, even though they have the strongest credit and virtually eliminate credit risk, if unanticipated SRF cash needs arise, and these Triple-A securities need to be sold or liquidated prior to their maturity, market risk is incurred. If interest rates are higher than when these securities were purchased, loss of principal will likely result.

When cash flows can be relatively well-projected, such as in loan origination or construction disbursements, another strategy is to purchase a bond portfolio of Treasury or government securities which at least initially can be customized to match the SRF cash flow needs. Credit risk is again eliminated and market risk is somewhat mitigated, but still remains if cash needs change from anticipated projections. A useful investment technique is called "laddering. " This allows the cash manager to break the block of cash into smaller investment blocks, and then structure the investment so that they mature on staggered dates, i. e., a block of $80 million is broken down into 8 blocks of $10 million, each with different maturities from 7 days to 60 days, providing for some funds to be liquid at all times.

If funds are needed sooner than anticipated and longer-term reserve or loan payment funds need to be accessed sooner than anticipated, market losses can be substantial. In the event construction or loan disbursements are needed later than projected, additional securities must be purchased and there may be potential reinvestment risk from a change in interest rates.

Purchasing a portfolio of shorter and longer term securities for these long-term investment horizons helps protect against market risk, but at the cost of lower yield and increased reinvestment risk when these short-term investments mature and the reserve fund is still required to be funded. Although this more conservative approach reduces market risk, it may result in an inefficient cash flow match, likely resulting in lower investment yield. It is important to note that the bond portfolio alternative requires active management of the securities portfolio to

[3] The same investment considerations and constraints apply to municipal bonds if they are a permitted investment.

address these ongoing needs and may well require services of an outside financial advisor, incurring additional transaction and investment management fees.

Changing circumstances requiring either access to funds sooner than anticipated or reinvestment of principal because cash draws are slower than planned, may produce financial benefits if interest rates have dropped or risen respectively since the initial investment. Attempting to plan investments that anticipate such fortuitous circumstances requires predicting future interest rate trends; a risky business. If this is the plan, be sure to work with professionals that may help advise which investment vehicles will help minimize risks with this type of plan.

3. *Fully Customized Investment Agreements*. These products are customized to the specific needs of various restricted SRF funds such as debt service reserves and construction funds. Financial institutions such as banks, broker-dealers and insurance companies provide these I*nvestment Agreements (IAs) or Guaranteed Investment Contracts (GICs). GICs,* or investment agreements, are generally only available for larger investment amounts, over $20 million for short-term construction funds or $2-$4 million for long-term reserve funds, and should be obtained by competitive bid process in which the SRF manager specifies the amount to be invested, the desired term, the required credit quality of potential bidders, any collateral, withdrawal schedules, and any other requirements appropriate to the specific circumstance, and with this set of specifications then seeks bids on the interest rate. Typically, the rate is locked in over the term of the investment, usually pegged to something around the arbitrage, limited rate of the issue. To meet IRS requirements for debt service reserves, a minimum of three bids is required. This allows for a clear choice of options between qualified providers. These products may require more work on the part of SRF managers at the outset, but will require less activity over the long term than a portfolio of securities. The GICs are established by contract and require almost no maintenance on the part of the SRF staff. Some basic reconciliation work is necessary, but for the most part, the contract clearly defines the activities of all parties.

Investment Agreements are used to invest debt service reserves where maturity is matched to the maturity of the debt service reserve, thereby matching investment horizon with investment term and eliminating reinvestment risk. Withdrawals from the investment are usually permitted, so long as the funds are being used for their stated purpose and not for reinvesting funds at a better yield. Under these circumstances, withdrawals are permitted at PAR, regardless of current interest rates, thus eliminating market risk. These investments are constantly valued at par, simplifying periodic valuation of fund investments and also providing further customization to exactly meet investment beginning and end or maturity dates, methods and timing for paying interest earnings, and options for paying or reinvesting interest earning on the investment. In instances other than debt service reserves (e.g., construction or loan disbursement funds), where cash flows are less precise, the SRF may specify withdrawals “no sooner than” a date certain, or require full flexibility to withdraw at any time and amount but such provisions will reduce the interest rate accordingly.

While market and reinvestment risks are widely eliminated with investment agreements, credit risk remains as a function of the financial strength of the agreement provider. Typically providers are financial institutions that are under constant credit review by the rating agencies. By setting minimum requirements for the creditworthiness of the institution and the underlying securities that collateralize the investment, most credit risk is eliminated. Essentially, the SRF must rely on the financial strength of the investment agreement provider to ensure that principal will be returned and interest paid out based on the terms of the investment agreement and its full length, which can be 20 years or longer. Credit risk can be further mitigated by requiring additional collateral from the provider in the form of pledged high-quality government securities held by a third party custodian.

Another product in the investment agreement category, which has some attractive features, is the ***Flexible Repurchase Agreement***. The flexible repurchase agreement differs from the GIC in that it provides additional security to the investor in the form of collateral, usually government securities, to reduce credit risk. Like a GIC, the flexible repurchase agreement incorporates the element of flexibility to withdraw funds over a pre-determined period, rather than a date specific. As an additional safeguard, a third-party custodian holds the collateral that typically includes a margin in excess of the principal, and the securities are valued at frequent intervals. Yields are usually lower on flexible repurchase agreements than on GICs and other investment agreements, but the collateral reduces credit risk. Thus the SRF has the opportunity to weigh the tradeoff between risk and yield in considering these two structures.

Liquid operating funds or the SRF equity funds (capitalization grant, state match, and recycled funds not yet pledged to specific loans) should also be invested to maximize fund balances and maintain SRF growth. Some of the products mentioned above, such as CDs as well as mutual funds, are one way to go. Also, there are tax-exempt corporate paper vehicles that tend to have better rates than US Treasuries and government agency securities, with AAA ratings - therefore very safe - and tend to have maturities in the 7 to 28 day period. These types of investments can be useful with a pool of money where the investment time line is VERY uncertain. Structuring a portfolio of smaller chunks of principal with a staggered maturity calendar can keep funds earning better rates, but keep the money liquid enough so that it can be accessed with no penalty when needed.

Professional Assistance with Investments

Working with an investment "counselor" or "advisor" may yield other types of investment instruments that better satisfy the investment horizon, minimize risk, and yet produce better yields than the typical bank CD or generic mutual fund. Given the range of issues to be addressed in managing a mature SRF investment portfolio, the SRF may choose to call on outside expertise for advice. Leveraged programs are likely to rely on bond counsel, and their financial advisor for investment of reserve funds and bond proceeds, because the investment decisions are an integral part of the borrowing transaction.

The SRF program may also consider securing assistance of a separate investment advisor. In addition to advice on investment options, outside professional staff can assist in hiring a firm to purchase and/or manage portfolios of government agency securities, prepare documents to purchase GICs, and maintain necessary records. Effective outside assistance, however, requires clear direction from SRF staff, frequent communication and on-going performance monitoring, and as with any professional advisory service, has a cost.