

thousands of changing taxpayers, resident and non-resident, is the equivalent in all respects of a loan by an individual or small group, in an attempt to equalize the two methods by a theoretical (practically impossible) compounding of the interest on the yearly differences between the two methods, applied, for instance, to a fifty-year loan. The basis for either of such fallacies vanished when equal annual payments of the principal and interest are adopted with serials, as is often the case, and would be optional with the state or city.

Sold Well in Market.

Some hesitation arose as to the receptivity of the New York market for serial bonds, all doubts of which happily were removed pending the sessions of the convention by the successful marketing (June 29, 1915) of New York City's first serial-bond loan for \$24,000,000 at a higher price than was obtained for a simultaneous sinking-fund loan of \$46,000,000.

The sinking funds of New York State amount to about \$40,000,000; those of New York City amount to about \$370,000,000. Theoretically such funds are to be promptly and continuously invested to yield a rate of interest above the usual bank deposit rates. But actually, as seems by New York City's weekly financial statements, millions of dollars of that city's sinking funds are uninvested, the weekly statement for October 5, 1915, showing "sinking funds uninvested," September 30, to the amount of \$25,969,761. The average "uninvested" amount for New York City during the past year appears to have been more than \$10,000,000 each week, implying a material daily loss of interest above ordinary bank deposit rates, and to that extent subverting sinking fund principles.

Serial Bond Method.

Discharging the principal of a debt by partial payments is as old as simple arithmetic. It is adopted either in the constitution or the laws of several of our States. Benjamin Franklin recognized it in the famous codicil (1789) to his will, whereby he left to the cities of Boston and Philadelphia \$5,000 each, contemplating the investment thereof for two centuries, the income in part to be loaned to young married artificers, who were to repay, "with yearly interest, one-tenth part of the principal." This is the serial-bond method. (Franklin's Works, Federal Edition, Vol. XII., pages 213-219.)

New York's failure to adopt this method apparently arose in part from a misapprehension. Thus, in a pamphlet on "New Methods in Municipal Financing," dated October 29, 1913, and officially recognized, there is an instructive essay on the methods adopted by the controller of the city of New York, wherein (page 14) the "serial form" is said to be "undoubtedly the best type of bond for small municipalities," but "in the case of larger cities, however, the plan is impracticable." But when the attention of the controller and four of his experts was soon thereafter called to the astonishing contrasts between the two systems when applied to New York's fiscal operations, and to the futility of being overawed by their magnitude or by the ephemeral hesitancy of local bankers, a second pamphlet, dated January 15, 1914, appeared, wherein the controller affirms (page 3) that: "A comparison of this (serial) method of borrowing with our present (sinking fund) method of issuing long-term bonds suggests financial results that are almost astounding."

And in an example that the controller gives of a \$50,000,000 fifty-year sinking fund loan he affirms (page

4) that "the difference between the two methods would mean a saving of \$73,663,750 to the city of New York."

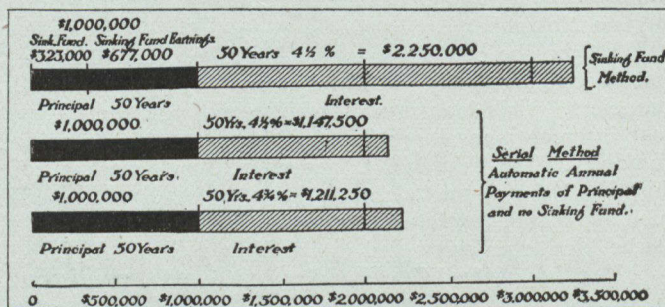
The controller might have added from the information furnished him that if only two-thirds of the bonded debt of the city of New York, that is, if \$1,000,000,000 of that debt had originally been issued in serial instead of sinking fund form, assuming uniform terms of fifty years at 4 per cent., the difference in the interest account between the two forms would be the amazing sum of \$980,000,000! Sinking funds ordinarily pay no part of the interest. Even if the sinking funds in the case here presented were credited with earning 4 per cent. continuously for the fifty years, yet the difference in favor of the serial-bond method would be \$303,057,000!

Provision for Exchange.

To meet such an extraordinary and oppressive financial plight the new constitution for New York not only prohibits future sinking fund loans, but authorizes legislation to exchange outstanding sinking-fund bonds for serial bonds. Such an exchange would not be compulsory, but voluntary, and would be advantageous to both borrower and lender, as the state could afford to make the exchange at a higher rate per cent. than the original issue.

That serial bonds for public loans are at last recognized by financiers on this side of the Atlantic as de-

The Contrast in Costs



This chart shows the contrast between the sinking fund and the serial bond methods, as applied to a \$1,000,000 50-year loan at 4% refunded or exchanged at the same rate, and also by increasing the rate one-quarter per cent. to 4 1/4%. The sinking fund provides for the principal only, not for the interest, which is the larger item. The difference in favor of the serial method, interest at 4 1/4%, is \$425,500, and, with interest at 4%, \$361,750 for each million dollars.

cisively in accord with correct administrative economics is indisputable. European countries may be slow in this respect to follow America's lead, but the principles of sound finance are universal, and Europe as a lender (if it is to be) will probably recognize the advantage of the United States on this score, both in new bond issues and in the readjustment of numerous North and South American public debts.

In Massachusetts the taxpayers of Boston are confronted with outstanding sinking-fund bonds for about \$90,000,000, maturing between 1920 and 1958, and the mayor of Boston has caused to be filed at the state house Document No. 226 for 1915: "To authorize the city of Boston to exchange serial bonds for outstanding bonds of the city for which there is a sinking fund." This bill is in order for action by the next General Court, together with the report (House Document No. 1650) dated January