



Too Big to Trust?

Banks, Schools, and the Ongoing Problem of Interest Rate Swaps

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EXECUTIVE SUMMARY

Philadelphia, like many cities, has faced serious financial difficulties in recent years. These difficulties have forced the city government to make ends meet by cutting agency budgets, cutting services and raising taxes. The city trimmed almost \$100 million off its budget during 2008 and 2009, and the school district faced a \$629 million budget hole just this year, which was closed by laying off teachers and cutting programs for students.

Philadelphia is not alone. Two years after the official end of the Great Recession, Pennsylvania and the nation have yet to recover fully. Pennsylvania's unemployment rate was 7.9% in November 2011, and the state would have to add 239,600 jobs to regain its pre-recession employment rate.ⁱ Sluggish job growth and weak consumer confidence have dampened tax revenue, causing devastating cuts to public schools and colleges, and leaving local governments with fewer resources to cope with the effects of the economic downturn. While these financial difficulties may have various causes, large financial institutions are significant culprits.

Large financial institutions played a role in causing the Great Recession. As the Financial Crisis Inquiry Commission concluded, "Too many of these institutions acted recklessly, taking on too much risk, with too little capital, and with too much dependence on short-term funding." The economic fallout of this recession has cost the city, and the nation, greatly.

The risky and speculative financial instruments that brought down banks and brokerage houses have also cost Pennsylvania taxpayers millions of dollars. At the instigation of the financial services industry, beginning in 2003, Pennsylvania school districts and municipalities began to use qualified interest rate management agreements (interest rate swaps and swaptionsⁱⁱ), risky financial instruments that put them on the wrong side of declining interest rates and led them to pay out millions of dollars to investment banks.

The impact has been significant: according to Pennsylvania Auditor General Jack Wagner, 107 school districts and 86 local governments entered into swap agreements related to \$14.9 billion in debt between October 2003 and June 2009.ⁱⁱⁱ

Interest payments and cancellation fees associated with these interest rate swaps and swaptions have cost the city hundreds of millions of dollars. City agencies and the school district entered these financial transactions with financial institutions, many of which received billions of dollars in bailouts following the economic crash. Many of these financial losses have already been realized, but currently active deals mean the city stands to lose millions more in the years to come. Overall:

- The city and school district have lost **\$331 million in net interest payments and cancellation fees** relating to swaps negotiated with bailed out financial institutions such as **Wells Fargo, Morgan Stanley and Goldman Sachs, as well as other banks**; and
- **The city could potentially lose more than \$240 million in additional net interest payments** from still-active swaps between the city agencies and the same financial institutions if interest rates continue to remain low.

These financial institutions have profited, while Philadelphians have paid the price through lost city services, lost jobs, and lost school programs. The financial institutions, on the other hand, have returned to profitability with subsidies from taxpayers—including Philadelphia taxpayers—and with multimillion-dollar contracts with the city. Moving forward the banks should respond as good corporate citizens of Philadelphia, by refunding a portion of the lucrative cancellation fees they received for terminating bad deals and renegotiate those deals which are currently active.

WHAT IS A SWAP?

An interest rate swap is a derivative instrument in which one party exchanges a stream of interest payments in exchange for another rate. A bond issuer (such as a city government or a school district) will often take out swaps to convert a variable interest rate to a fixed interest rate to protect against interest rate increases, a practice called “hedging.” A government that issues variable-rate bonds to raise money may choose to “hedge” the interest rate by swapping the variable rate with a bank in exchange for a fixed rate. This allows the government to reduce some of the risk associated with a potential rise in interest rates.

Ideally, swaps work in the favor of both the financial institution and the bond issuer. The bank makes a profit from fees and from the interest rate on the swap, and the bond issuer achieves a stable interest rate. However, as a result of the Great Recession, interest rates plummeted and the payments became nearly one-sided, with the counterparties receiving far larger payments than the bond issuers. These same financial institutions received major bailouts from taxpayers following the financial crisis to ensure they did not go bankrupt under the weight of their bad investments and financial decisions, but municipal governments and school districts with swap deals received no across-the-board assistance from the banks. Instead, they have been expected to continue making excessive interest payments or paying multimillion-dollar cancellation fees.

Municipal governments’ widespread use of interest rate swaps and other derivatives was facilitated by the Commodity Futures Modernization Act of 2000, which expressly removed swaps and other derivatives from federal regulation under the federal Commodities Exchange Act (CEA). Many states had restricted speculation on securities under anti-gambling laws, however, the Commodity Futures Modernization Act pre-exempted state authority to continue regulating these transactions.^{iv}

Bethlehem School District Case

The first swaps agreements to undergo major scrutiny was that of the Bethlehem School District, which entered into at least 13 swaps agreements between 2003 and 2009 on principal of \$273 million in debt. Auditor General Jack Wagner found that a single swap agreement undertaken by the district cost taxpayers between \$10.2 million and \$15.5 million more than if the swap had not been authorized.^v

Based on his investigation, the auditor general characterized swaps as “... highly risky and impenetrably complex transactions that, quite simply, amount to gambling with public money. Moreover they are susceptible of being marketed deceptively and they principally benefit the investment banks and multitude of intermediaries who sell them to relatively unsophisticated public officials.”^{vi}

In Pennsylvania, Act 23 of 2003 expressly authorized local governments and school districts to enter into swaps agreements. Between 2003 and 2009, local governments entered into 626 separate swaps agreements.

The auditor general criticized the statute which he argued was written “primarily for the benefit and protection of the financial services industry, not the government issuers or taxpayers.”^{vii}

In addition, the audit identified marketing practices undertaken by investment banks, intermediaries and investment advisers in the Bethlehem case, which the auditor general concluded were “deceptive.” These include:

- a. Fees that were paid by the district which initially had been characterized as paid by the banks;
- b. Huge profits by intermediaries that were not disclosed to the district;
- c. Intermediaries with financial conflicts of interest that were not disclosed to the district; and
- d. Deals that appeared lucrative for the district, which were significantly more lucrative to investors, that were not disclosed to the district.

Based on his findings, the auditor general recommended the General Assembly repeal Act 23 and that municipalities divest themselves of swaptions. He called on law enforcement officials to investigate and prosecute conflicts of interest in the transactions, and pursue avenues to recover funds, including equitable relief from existing swaps obligations.^{viii}

THE DAMAGE ALREADY DONE

The School District Swaps

The School District of Philadelphia floated series 2004 bonds to help finance school projects and to refund other existing bonds.^{ix} Instead of taking out fixed-rate bonds, the school district used variable-rate bonds. These are similar to adjustable-rate mortgages because interest rates can fluctuate depending on market conditions.

To protect itself from sudden spikes in interest rates, the school district took out 10 fixed-to-variable swaps with Wachovia (Wells Fargo purchased Wachovia in 2008), Merrill Lynch, Goldman Sachs and Morgan Stanley. The school district agreed to pay fixed rates ranging from 3.240% to 3.815% on the amounts of the bonds; in exchange, the banks agreed to pay a variable rate equal to a percentage of the London Interbank Offered Rate (LIBOR).^x

The premise behind swaps is that the variable rate the bank has to pay the city should approximate the interest rate on the variable-rate bonds, so the school district's only cost should have been the fixed rate it pays to the bank. In effect, the school district was able to obtain a bond with a "synthetic fixed rate" of 3.240% – 3.815%, which is likely cheaper than what it would have had to pay for a conventional fixed-rate bond in 2004.

These swaps were all fixed-to-variable swaps connected to bonds issued by the school district. Because these swap agreements were made at a time when the economy was doing well, variable interest rates were higher and the possibility they would increase would have been a real threat to the district. Instead, the financial crisis of 2008 occurred, sending interest rates to near zero. In 2004, at the time the bonds were issued, the LIBOR rate was 1.493%. As of December 2010, when the last swap was cancelled, the LIBOR rate was 0.26%.^{xi} The drop in LIBOR meant the associated financial institutions' payments also plummeted, whereas the school district's payments stayed at the higher fixed rates. What started out as approximately equal payments turned into a nearly one-sided transfer.

In January 2011, the Philadelphia School District paid \$63 million to Morgan Stanley Capital Services Inc., Goldman Sachs Capital Markets LP and Wells Fargo Bank N.A. to cancel a total of five fixed-to-variable interest rate swaps.^{xii} This comes in addition to the nearly \$26.6 million the school district paid to Morgan Stanley Capital Services Inc. and Goldman Sachs Bank USA in April 2010 to cancel another four swaps.^{xiii}

Based on analysis of historical bond and swap interest rates and information obtained through Comprehensive Annual Financial Reports (CAFRs) and bond official statements, we estimate the school district has paid approximately \$157,965,000 to the banks and received \$86,098,000 in exchange over the entire life of the 10 swaps—a net loss of \$71,867,000.^{xiv} Including the cost of the nine cancellations brings the total cost to the school district to more than \$161 million. Just as home owners were sold bad deals by Morgan Stanley, Wells Fargo, and Goldman Sachs and are now facing foreclosure, Philadelphia was sold a bad deal and now our children are paying the price—in the form of larger classrooms, fewer teachers, and cuts to music, language, after-school and gifted programs.^{xv}

The City Swaps

The City of Philadelphia entered into several swap agreements to synthetically refund outstanding bonds: general obligation, lease, airport and water. Instead of taking out fixed-rate bonds, the city used variable-rate bonds.

As with the school district, the city took out fixed-to-variable swaps with Royal Bank of Canada, Merrill Lynch, Wachovia/ Wells Fargo, JP Morgan Chase and Citigroup to protect itself from interest rate increases. The city agreed to pay fixed rates ranging from 3.829% to 4.53% on the amounts of the bonds; in exchange, the banks agreed to pay a variable rate equal to the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index or, in one case, 68% of the London Interbank Offered Rate (LIBOR).^{xvi} Through the swaps, the city was able to effectively obtain a bond with a “synthetic fixed rate” of 3.829% to 4.53%, which is likely cheaper than what it would have had to pay for a conventional fixed-rate bond in each year it entered into agreements.

General Obligation Bond

In December 2007, the city entered into a swap deal with the Royal Bank of Canada (RBC) to synthetically refund all or a portion of several outstanding general obligation bonds with an original amortizing notional value of \$313.5 million. In 2007, at the time the bonds were issued, the SIFMA rate was 3.4%. Since then, the SIFMA rate has fallen as low as 0.07% (in July 2011).^{xvii}

In July 2009, the city terminated approximately \$213.5 million of its \$313.5 million swap on its 2007 general obligation bonds and paid a termination payment of \$15.5 million to the RBC. The city issued new 2009 B general obligation bonds to match the remaining \$100 million on the swap, keeping the same terms. Before termination of the \$213.5 million, the city had lost roughly \$10.62 million on the swap deal. As of July 27, 2011, the city had lost about \$33.6 million, considering both payments on the swap and the termination fee.

City Lease/Philadelphia Authority for Industrial Development (PAID)

In December 2007, the Philadelphia Authority for Industrial Development (PAID) entered into two swaps to refund its outstanding series 2001B bonds and put forth its 2007B bonds. The original amount of the two swaps was \$289.7 million. The counterparties were JP Morgan Chase Bank and Merrill Lynch Capital Services. Roughly 75% of the notional value was with Merrill Lynch and 25% with JP Morgan. Through July 2011, we estimate the Authority paid roughly \$42.2 million to the two counterparties and received \$9.2 million in return, for a net loss of about \$33 million.

Philadelphia Airport Swap

In April 2002, the city entered into a swaption that provided the airport with an upfront payment of \$6.5 million to synthetically refund its 1998 bonds. It gave JP Morgan the option to enter into a swap with the airport that was exercised June 15, 2005. The airport pays multiple fixed rates (starting at 6.466% and decreasing to 1.654% over the life of the swaption) and receives a variable rate in return equal to SIFMA at the time and based on an amortizing notional schedule. We do not have access to the forward decreasing fixed rates at this time so all figures are based on an estimated depreciation schedule. Through July 2011, we estimate the city paid \$67.8 million toward the swaps and received \$20.7 million plus the original up-front \$6.5 million payment, for a net loss of \$40.6 million.

Water and Sewer Swap

In December 2002, the city entered into a swaption with Citigroup that provided the city with an upfront payment of \$4 million to synthetically refund its 1995 bonds. It gave Citi the option to enter into a swap with the airport that was exercised May 5, 2005. The city pays a fixed rate of 4.53% and receives a variable payment equal to 68.5% of LIBOR, based on an amortizing notional schedule. Through July 2011, we estimate the city paid \$24 million toward the swaps and received \$9.6 million plus the original upfront \$4 million payment, for a net loss of \$10.5 million.

Wastewater Swap

The City's Comprehensive Annual Financial Report states that it entered into a forward-starting swap with Wachovia/ Wells Fargo in August 2010 with a \$90 million initial notional. The city pays a fixed rate of 4.52275% in exchange for a variable rate equal to the SIFMA index. We have not been able to definitively match this reported swap with a bond, however, so the estimated costs both already incurred and going forward are unknown.

Terminated Swaps

The city was also engaged in additional swaps with JP Morgan, Citigroup and Merrill Lynch that have been terminated over the past four years. Termination fees ranged from \$15.2 million to \$48.8 million. Discounting upfront payments the city received, we estimate the total cost of these terminated swaps was more than \$52.4 million. We have not yet done a full analysis of historical payments on these swaps to get a full sense of the money lost on these investments, suspected to be far greater than the termination fees paid.

Conclusion and Summary

As of July 2011, the city lost roughly \$170 million on its current outstanding and terminated swaps. Adding in the costs of the school district swaps, we estimate the combined cost to Philadelphians is at least \$331 million. Given this figure does not include certain swaps, the cost could even be higher.

These costs are attributable to the crashing interest rates that accompanied the Great Recession, an event which many of the financial institutions now benefitting from these payments helped create. And while those financial institutions received federal assistance to protect them from their bad investments, Philadelphia's agencies and school district have been forced to shoulder the cost.

THE DAMAGE STILL TO COME

While the city and school district have already taken significant losses on bad swaps and swaptions, there is potentially more damage still to come. A number of the city's swaps are still active, and still forcing the city to make excessive payments to financial institution counterparties. The following amounts are estimates, based on the assumption the SIFMA rate and LIBOR will not rise above 0.3%. The SIFMA rate has not gone above 0.6% since late 2008, and has not risen above 0.3% since 2009. Its lowest point in the same period was 0.07% in July 2011. LIBOR has also been below 0.3% since 2009 and has fallen as low as 0.187% earlier in 2011. While it is, of course, impossible to predict what course rates will take over the next 20 years, the point to note is the potentially huge exposure the city faces if rates stay where they are.

General Obligation Bond

The city still has a swap with Royal Bank of Canada on the remaining \$100 million of its 2007 general obligation bond swap. The swap on the remaining \$100 million terminates in 2031. By the time the swap terminates, the city would be expected to pay an additional \$64.2 million to RBC in exchange for \$5 million in return, for a net loss of \$59.2 million.

City Lease/Philadelphia Authority for Industrial Development (PAID)

The PAID swap with Merrill Lynch and JP Morgan is active through 2030. Over those 20 years, the city's estimated payments would total almost \$120.5 million, for which it would receive about \$9.1 million, for a net loss of \$111.4 million. Of this, approximately \$83.6 million would go to Merrill Lynch and \$27.8 million to JP Morgan.

Philadelphia Airport Swap

The Philadelphia Airport swap is currently set to terminate in 2025. Assuming the fixed interest rates depreciate at regular intervals on an annual basis, the city stands to lose another \$57.5 million over the life of the swap.

Water and Sewer Swap

The city's water and sewer swap is set to terminate in 2018. In that time, the city could lose another \$16 million on this swap.

Conclusion and Summary

Using the assumptions set forth above, the city could lose approximately \$244 million more on these four swaps by the time the associated bonds mature. Additional losses could also be possible from the bond associated with the August 2010 wastewater swap mentioned above. When combined with the losses already realized, the city and school district could stand to lose more than \$575 million. This half billion dollars is money the city of Philadelphia and the Philadelphia School District desperately need to provide services to children and other citizens of the city.

THEY GOT BAILED OUT

The financial crisis hit everybody hard, even financial institutions. In October 2008, the Treasury Department announced it would purchase up to \$250 billion of stock in faltering financial institutions as part of the Troubled Asset Relief Program (TARP),^{xviii} which eventually expanded to \$700 billion. Of course, this was just a drop in the bucket of more than \$3.5 trillion in potential support offered to Wall Street by the federal government in the aftermath of the financial crisis.^{xix} Except for Royal Bank of Canada, all of the financial institutions that engaged in swaps with the city and school district received TARP money. The total TARP funds received by these institutions comes to more than \$160 billion.^{xx}

- Bank of America (Merrill Lynch parent) and its subsidiaries received more than \$45 billion;
- Citigroup and its mortgage arm received more than \$45 billion;
- Goldman Sachs received \$10 billion;
- JP Morgan Chase and its subsidiaries received more than \$25 billion;
- Morgan Stanley received \$10 billion; and
- Wells Fargo (Wachovia parent) and its subsidiaries received more than \$25 billion.

PHILADELPHIA GOT SOLD OUT

While most of the TARP money has been repaid to the federal government, the fact remains that these financial institutions still benefitted from the generosity of the citizens of Philadelphia and the rest of the country in their time of need. The time has come for them to return the favor. The Philadelphia School District was forced to close a \$629 million shortfall earlier this year by laying off teachers and other staff, increasing class sizes, and cutting intellectually gifted and music programs, among others.^{xxi} It now faces an additional \$39 million hole that will likely lead to additional cuts.^{xxii}

The financial institutions involved in the swap deals in Philadelphia can do something about it. While the money involved in swaps is not enough to erase these budget holes, it is enough to shrink them. Paying back termination fees to the school district as an act of goodwill could put students back in music and gifted programs. Renegotiating active swaps with the city to more equitable terms could alleviate future cuts to the city budget. It's only fair.

TECHNICAL NOTE

Swaps were discovered by examining the Comprehensive Annual Financial Reports (CAFRs) of the city and school district. The CAFRs listed the associated bond, as well as the fixed rate paid by the city/school district and the variable rate paid by the bank as well as the counterparty in the swap.

Once these figures were identified, we identified the official statement on the original bond to obtain the sink schedule to determine the depreciation rate on the bond/loan for which the swap was based. We also determined the historical variable interest rates of SIFMA, LIBOR, etc. Where the variable rate changed more than once a month, we used the rate at the last date of the month for the purposes of our analysis.

From this information, we were able to estimate historically how much each party paid as part of the swap deal, as well as the discrepancy in rates paid by each party.

For forward looking rates, we used an estimated variable rate (discussed in the body of the paper) combined with the sink schedule of the bond to achieve our estimate.

ENDNOTES

- ⁱ Keystone Research Center, <http://keystoneresearch.org/issues-guides/pa-economy-track/>
- ⁱⁱ A swaption is an option giving the buyer the right to enter into a swap agreement by a specified date.
- ⁱⁱⁱ Office of the Pennsylvania Auditor General. *A Special Investigation of the Bethlehem Area School District, Lehigh/Northampton Counties: A Case Study of the Use of Qualified Interest Rate management Agreements (Swaps) by Local Government Units in Pennsylvania*, November 2009. <http://www.auditorgen.state.pa.us/Reports/Investigations/invBASD111809.pdf>
- ^{iv} Ibid p.6
- ^v Ibid p. 1
- ^{vi} Ibid p.2
- ^{vii} Ibid p. 2
- ^{viii} Ibid p. 3
- ^{ix} School District of Philadelphia Comprehensive Annual Financial Report for the year ending June 30, 2005.
- ^x SEIU analysis of Philadelphia School District Comprehensive Annual Financial Reports FY 2004-2010
- ^{xi} http://www.wsjprimerate.us/libor/libor_rates_history.htm
- ^{xii} “Philadelphia Schools to Spend More Exiting Swaps Contracts Than on Books”, Bloomberg, December 14, 2010, <http://www.bloomberg.com/news/2010-12-14/philadelphia-schools-to-spend-more-exiting-swaps-contracts-than-on-books.html>, accessed May 19, 2011.
- ^{xiii} School District of Philadelphia Comprehensive Annual Financial Report for the year ending June 30, 2010, page 74; exact amount is \$26,569,000.
- ^{xiv} SEIU analysis of 2004-2010 CAFRs, amortization schedules in the 2008 Bond OS, and historical swap interest rates accessed from Bloomberg and bankrate.com.
- ^{xv} http://articles.philly.com/2011-09-18/news/30172286_1_music-teacher-school-police-officer-guidance-counselor
- ^{xvi} All information on City swaps is from SEIU analysis of City of Philadelphia Comprehensive Annual Financial Reports, Bond Offer Sheets, and historical swap interest rates accessed from Bloomberg and bankrate.com.
- ^{xvii} <http://www.sifma.org/research/item.aspx?id=19762>, “updated 7/27/2011”, accessed August 1, 2011.
- ^{xviii} <http://www.treasury.gov/press-center/press-releases/Pages/hp1207.aspx>
- ^{xix} Prins, Nomi and Krisztina Ugrin, Bailout Tally Report, October 1, 2010.
- ^{xx} <http://projects.propublica.org/bailout/list/simple>
- ^{xxi} Remarkable city school feels squeeze, Philadelphia Inquirer, September 18, 2011.
- ^{xxii} Philadelphia Schools Face Additional \$39 million Budget Shortage, Philadelphia Inquirer, October 27, 2011.



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