Interest Rate Swaps
Presented to the Pennsylvania House of Representatives
House Finance Committee
March 3, 2010

Dr. David Davare, Director of Research Services

Good morning, Chairmen Levdansky and Rohrer and members of the House Finance Committee. My name is David Davare and I am the Director of Research Services at the Pennsylvania School Boards Association. I am by joined by Patrick Cusatis, Ph.D., CFA, the association's consultant on this issue.

PSBA is appreciative that you called this hearing to discuss school districts' use of interest rate swaps to manage their debt obligations and investment returns. We also want to recognize the value of the Auditor General's efforts for calling attention to the potential problems of interest rate swaps. Like, the Auditor General, we fear that some financial advisors may be less than independent and as a result school directors may not be receiving full disclosure of the risks and the straightforward information that they need to employ. Additionally, we are concerned that frequent monitoring of these agreements from impartial financial consultants seems to have been ignored to the detriment of school districts. Although PSBA did not advocate for or take a position on the statutory change embodied in Act 23 of 2003, it would suggest a different approach than that of the General's recommendation of a complete ban on these transactions and immediate disentanglement. Our consultant shall discuss this issue in greater detail during his remarks.

Dr. Cusatis is an Assistant Professor of Finance at Penn State Harrisburg. He joined Penn State Harrisburg full-time in 2002. Prior to joining Penn State, Dr. Cusatis was a Senior Vice President in charge of municipal derivatives and municipal remarketing at Tucker-Anthony. He also was employed as Director at CoreStates Bank and First Union National Bank, where he managed an investment portfolio in excess of $3 billion. Dr. Cusatis also specialized in municipal new product development at Lehman Brothers in New York. He and his colleagues pioneered many of the derivative products in the municipal market.

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Dr. Cusatis is the author of numerous articles for books and academic journals such as the Journal of Financial Economics, the Journal of Futures Markets and the Journal of Applied Corporate Finance. His research has been highlighted extensively the financial press, including *The New York Times, The Wall Street Journal, Barron's, Fortune, Forbes, CNN, CNBC* and *Business Week*. He also co-authored two books on common stock valuation and two books on derivative securities. He is a graduate of the Pennsylvania State University.

To date, PSBA has published three articles in October 2008. They were entitled, *Potential gains, risk with swaps; Steps to take before choosing swaps, and Swaps in Pa: The perils and pitfalls of interest rate management agreements. They are attached to our* testimony. Additionally, we expect to undertake web-based trainings, an easy reader on questions that board members should ask on SWAPs, and provide other learning opportunities for our school board directors. PSBA has recently engaged Dr. Cusatis to assist our association meet our school boards' need for a more thorough understanding of interest rate swaps. We would be happy to entertain your questions after a review of Dr. Cusatis' PowerPoint presentation.

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October 2008 **Feature Article**

By Steven J. Fishman Esq., chief counsel, Pennsylvania Department of Community and Economic Development

Swaps in PA
The perils and pitfalls of interest rate management agreement

Financial "derivatives," including interest-rate hedges (referred to as "swaps"), have been employed by local government units, including school boards, authorities and municipalities, across Pennsylvania and the nation for at least 30 years. Swaps are marketed as a means by which the issuer of debt instruments can manage interest rate "risk." In reality, swaps also can create significant additional risk to the issuer.

No statutory authority specifically permitted, prohibited or significantly restricted the use of these hedging arrangements until Gov. Ed Rendell signed HB 1148 into law on Sept. 24, 2003 (Act 23). The act was, in part, a response to a nationwide epidemic of sizable losses by public entities resulting from such transactions.

One of the most widely publicized of these financial disasters in Pennsylvania affected Erie City SD, suffering a $2.2 million net loss.

In response to the mounting losses nationwide and in Pennsylvania, the Rendell administration, with bipartisan support in the legislature, enacted Act 23 of 2003. Act 23 provides requirements and procedures intended to assist public bodies to better understand the nature of and the inherent risks of swaps.

Swaps are being used (or perhaps overused) by tax-exempt obligation issuers as a means to keep a portion of their debt portfolio linked to the interest rate market, enabling them to switch from fixed interest rates to floating interest rates and vice versa without incurring multiple levels of debt or impacting the principal amount of existing debt.

Some financial advisers are so enamored of the potential benefits of derivatives that they may well have oversold the concept as a financial panacea for cash-strapped local governments, school districts and authorities.

Fallout from the recent subprime mortgage failures and real estate meltdown has spread into the portfolios of some of the largest and best-known banks and other financial institutions in this country, further raising the profile of swaps and their risks.
Pennsylvania has been relying on compliance with Act 23 and the diligence of elected and appointed local officials to avoid the "speculative" risks of derivatives. The primary question being asked today is whether the law and the actions by the applicable elected or appointed governing bodies are effective in reigning in the unwise use of derivatives. The answer is not clear at this time, in that the financial impacts of transactions that have failed or may fail may not have manifested themselves at this time but remain a substantial cloud over the issuing local entities.

Act 23 of 2003 provides a valuable framework for decision-makers to engage in better informed public discussion, deliberation and decision-making regarding swaps. Many critics of swaps question the depth of knowledge and

commitment to protecting the best interests of local government units by some "independent financial advisers" who are statutorily required to advise local government units on the benefits and risks of swaps.

Further, the capacity of local government staffs, especially in smaller local government units, to critically evaluate proposals from financial advisers has been identified as a current weakness in the system. Equally concerning is the capacity of elected officials, even with increased exposure to the risks of swaps during the Act 23-mandated process, to possess the requisite capability to understand these complex transactions and to appreciate the inherent risks.

A survey of swaps legislation in other states indicates that Pennsylvania has one of the most detailed and proactive statutes. Criticism in the other states and in Pennsylvania indicates that rather than additional legislation, what is most needed is a concerted effort to further educate decision-makers so that they can better fulfill the independent, prudential role envisioned for them under Act 23.

So, what can we do?
It is equally important that elected officials and appointed board members have a complete understanding of the derivative product being considered. The following are procedures that should be followed by local government officials to maximize their ability to fulfill their fiduciary role with respect to derivatives.

The protections built into Act 23 and the proper exercise of financial prudence require local government units to become more intimate with the substance of swaps, their potential risks and rewards and the proper procedures for approval of such agreements. Increased due diligence should, at a minimum, include:

Select an experienced financial adviser
Independent and knowledgeable financial investment advisers should be able to guide the decision-makers through the process and closely monitor the economic conditions that will affect these investments.

All advisers, however, are not equally capable of appreciating the nuances of these highly technical financial arrangements. Question prior experience and obtain personal references. Request evidence of past transactions and follow up to determine successes as well as failures of prior transactions.

The RFP process can be employed to maximize the success of the selection process by requiring a detailed scope of work, objective criteria for selection requiring, at a minimum, a proposed fee structure, public sector references, experience of the firm and the contact/lead staff person with swaps transactions, the general approach of the firm toward swaps analysis, planned approach to dealing with credit-rating agencies and marketing.

Select a truly independent financial adviser
Make certain that the adviser selected has no conflicts and has no prospective interest in providing services to any other party to the swaps transaction.

Evaluate alternative scenarios
Before engaging in these types of investments, it is imperative that alternative economic scenarios be examined to develop an accurate picture of the potential risks and rewards of a swap. Actively question benefit and risk assessments. It's what you don't understand that can harm you the most.

Examining the disclosure documents
Swap-leveraging features are complex. A critical review of the documents and asking questions is essential to a sound understanding of the transaction. Do not act out of panic to cover financial challenges by "quick-fix" solutions. The promise of substantial up-front cash payments to the local government unit may obscure potential risks.

Develop staff capacity
Whenever possible, encourage your staff to become more knowledgeable about swaps. The Governor's Center for Local Government Services at DCED and your statewide associations are valuable resources for obtaining such information and training.

Remember your fiduciary duty
Reliance on staff and financial advisers is certainly prudent, but doing so will not insulate a board from public criticism

if the swap is unsuccessful. Before a swap is approved, the board must truly understand the risks and be willing to assume those risks on behalf of the taxpayers as well as the board. **Be careful!**

Resources

- Associated Press, Dec. 8, 2007
- *Patriot-News*, Dec. 9, 2007
- Analysis by law firm Greenberg Traurig LLP, October 2003. www.gtlaw.com/pub/Alerts/2003/frimmerr_10.asp
- Analysis by PA Association of Bond Lawyers, "Act 23: To Swap or Not to Swap," Dec 5, 2003. www.pabondlawyer.org/media/downloads/pabl_update_2003.pdf
- *The Bond Buyer*, Feb. 20, 2008, "Interest Rate Swaps Under Scrutiny."
- *The Bond Buyer*, Feb. 1, 2008, "Hidden Swap Fees."
- *Government Finance Review*, August 2005, "Understanding Municipal Derivatives."
- Standard & Poors. www.standardandpoors.com
- Fitch. www.fitchratings.com
- Moody's. www.moodys.com
- Government Finance Officers Association, providing an excellent "Derivatives Checklist and Best Practices Guide." www.gfoa.org

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October 2008

Feature Article

*By **Mark Ulven,** vice present of the Moon Area SD Board of Directors and an attorney with experience in litigation involving interest-rate swaps. He may be contacted by e-mail at mulven@hrslaw.com*

Steps to take before choosing swaps

Swaps also have been used by school districts to refinance bonds and raise cash. But a few of these deals have cost school districts millions of dollars. Also, a few financial firms may have received large sums in undisclosed gains.
In its February 2008 issue, *Bloomberg Markets Magazine* reported on the experience of Erie City SD. Although the swap initially raised $750,000, the district paid $2.9 million to JP Morgan Chase & Co. to get out of the deal when the swap started working against the district. According to *Bloomberg,* JP Morgan also took in an undisclosed fee of $1 million on the deal.

Interest-rate swaps are financial contracts that derive their value from changes in lending rates. In September 2003, Pennsylvania gave school districts and other local government agencies the authority to enter into such deals. *Bloomberg* reported that 500 deals totaling $12 billion have been in the commonwealth.

Swaps and other interest-rate management contracts can be used to help school districts guard against the risk of volatile interest rates. But swaps also involve significant financial risks that school directors must understand.
School directors must be aware that these deals obligate their districts to pay substantial amounts of money to the other party in the swap if financial markets change and work against the district. A district may receive cash to offset borrowing costs when interest rates rise. But, if the swap index falls, a district will be obligated to pay cash to the other party in the swap, even if the district's bond rate does not fall.

School directors also must demand disclosure of the money that the financial firm will receive in setting up the swap. The financial firm makes deals for the district, in which the district either will receive from or pay money to another party. Whether the district pays or receives money depends upon future changes in lending rates. The bank's fee is not paid directly by the school district. Instead, the financial firm makes its money on the underlying deals with third parties. The financial firm is not required to disclose how it prices those trades.

The law enacted in 2003 is designed to protect banks and other financial institutions that enter into the swaps with school districts. If a school district fails to meet a payment obligation, the law gives the other party a judgment against the school district's bonding authority. The law also requires the secretary of education to withhold out of a district's state funds the amount due under a swap and to pay the withheld funds to the other party in the swap.

In addition, financial institutions typically require school districts to waive legal rights concerning representations and advice provided in marketing swaps and other interest-rate risk-management contracts.

School directors are urged to obtain independent financial and legal advice from professionals who are knowledgeable of the risks involved before entering into an interest-rate risk-management transaction.

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October 2008 **Feature Article**

By Dave Davare PhD, PSBA director of Research Services.

Potential gains, risk with swaps

*The preceding two articles addressed several issues associated with the use of interest-rate management agreements, commonly referred to as swaps. The first article by **Steven J. Fishman Esq.** was prepared for the PA Department of Community and Economic Development's use with municipalities. However, this applies to school districts as well as municipalities. The second article is from **Mark Ulven,** board member and vice president of Moon Area SD.*

The express authorization for investments using swaps is limited to proceeds of bonded indebtedness (53 Pa. CSA Section 8001, et. seq.). While this provides the potential for gains beyond ordinary investments, it also exposes the principal to either loss or substantially higher interest payments by the taxpayers of the district. This provision of the Local Government Unit Debt Act is not consistent with the provisions of the School Code (24 P.S. Section 4-440.1) which limits district investments to very conservative instruments designed to protect principal.

In both articles, the key aspect is the need for board members to be fully informed about the risk and complexity of swaps. There is no requirement in the act designed to ensure that members of the board fully and completely understand the terms and information being provided.

Also pointed out in both articles is the need for independent financial advice. The law requires that local government units (including school districts) must use an independent financial adviser (53 Pa. CSA Section 8281 (e) (5)). The act defines an independent financial adviser (53 Pa. CSA Section 8002). The definition indicates that this financial adviser shall not make money on the transaction. However, the act does not preclude the individual from advising the district and then accepting payment for the transaction after providing advice to the district.

Further, the act makes no provision for penalties to be imposed if a financial adviser violates the independence provision of the act. This situation has occurred in several districts. Here, it would be very beneficial for districts to enter contracts that provide, as part of the contract, for penalties where independence was not maintained.

Both articles identified the need to understand all potential fees. The fees related to this type of transaction are required to be fully disclosed. A requirement in the act is for the financial firm placing the transaction to disclose "consulting, advisory, brokerage or similar fees, paid or payable to the local government unit" in connection with the transaction (53 Pa. CSA Section 8002-Interest-Rate Management Plan).

This section goes on to require the disclosure of "any finder's fees, consulting fees or brokerage fees paid or payable by the other party" in connection with the transaction. The act does not require disclosures of fees paid to the financial firm. Additionally, the act makes no provision for penalties payable by the financial firm for failing to make full disclosures as required by the act.

Not clearly addressed in either article is that school districts must budget for payments required under the interest-rate management agreement. There is no requirement for either the independent financial adviser or the financial firm to

provide a schedule of potential payments under a "worst-case scenario" (53 Pa. CSA Section 8282). Under this section and the definitions section, none of the statements/forms/schedules under a qualified interest-rate management agreement are required to show potential exposure to loss.

When a board chooses to enter into a swap agreement, it should do so with a clear understanding of the potential liabilities as well as the potential benefits. Districts have benefitted from these agreements. However, many districts have been victims of high costs associated with accepting the risks of swap agreements.

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Municipal Swaps and Swaptions

Presentation to:
Pennsylvania House Finance Committee

March 3, 2010

Patrick Cusatis, Ph.D., CFA
Assistant Professor of Finance
Penn State - Harrisburg

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Market Overview

- The interest swap market is the largest and fastest growing derivative market
- Swaps are written on interest rates, equities, currencies, and commodities.
- According to the Bank for International Settlements (BIS), the outstanding volume of interest rate swaps was over $341 trillion as of June 2009.

2

Plain Vanilla Swap

- A *plain vanilla* interest rate swap is a contract under which two counterparties, a floating-rate payer and a fixed-rate payer, agree to exchange net payments at a series of future points in time.
- A notional principal amount is used to calculate the amount of the net payments.

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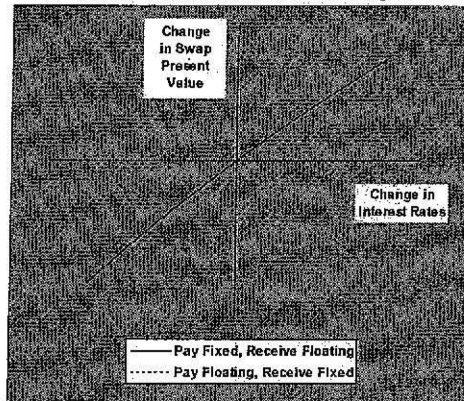
Plain Vanilla Swap (continued)

- The fixed swap rate is set on the pricing date of the swap.
- The floating rate is established for the first payment based on market levels on the pricing date and reset periodically based on market levels.
- The floating rate on a plain vanilla swap is based on three-month LIBOR.
- Common floating-rate benchmarks include the commercial paper rate, the U.S. Treasury-bill rate, SIFMA, and one-month LIBOR.

4

Swap Valuation



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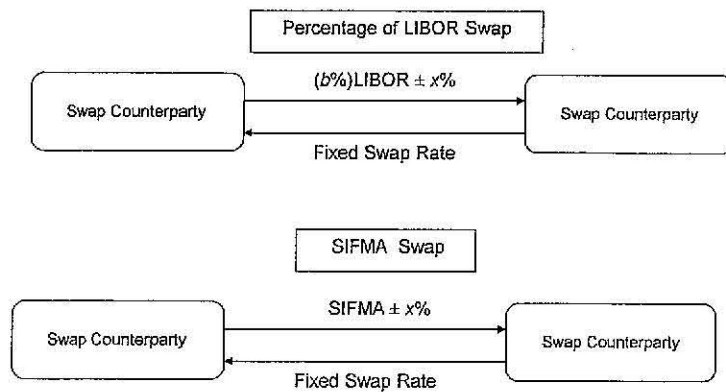
Municipal Swaps



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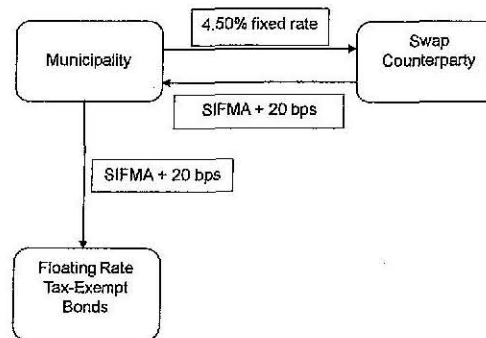
Most Common Use: Municipal Swap to Create Synthetic Fixed Rate Debt

Consider a municipality that is about to issue bonds. A fixed rate bond issue would yield 5.00%. If floating rate bonds are issued, the municipality will pay SIFMA + 20 bps. The fixed swap rate is 4.50% versus SIFMA + 20 bps. Using an interest rate swap, the municipality can synthetically create a fixed rate financing. The net financing cost is 4.50%, thus saving the municipality 50 bps.

Synthetic Fixed-Rate Bonds using Municipal Swap



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Forward-Delivery Interest Rate Swaps

- In some cases, an issuer will want to establish a swap based on current market conditions and have the swap begin accruing interest at a future date.
- This is referred to as a *forward-delivery swap.*
- Usually the forward swap rate is higher than a current delivery swap rate.

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Swaptions

- A *swaption* is the option to enter into an interest rate swap at a future date.
- The terms of the swap are established when the swaption is executed.

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Using a Swaption as a Rate Lock

- Consider a municipality that will potentially need to borrow $50 million in 6 months. Interest rates are currently low. In order to lock-in a level of interest rates, the municipality can purchase a payer swaption.
- In 6 months, if the bonds are needed, the municipality orders the swap to begin. The municipality also issues floating rate bonds and establishes a synthetic fixed rate financing at the swap rate.
- If the bond issue is not required in six months, the municipality lets the swaption expire.

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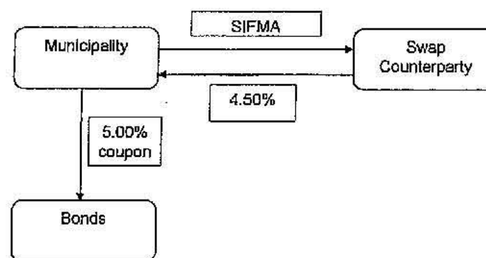
Potential Risk: Using Municipal Swaps to Create Synthetic Floating Rate Debt

Consider a municipality that issued fixed-rate bonds several years ago. The municipality has little floating-rate exposure. Using an interest rate swap, the municipality can synthetically change the fixed-rate bonds into floating-rate bonds. Assume the fixed-rate bonds were issued at par and pay interest at 5.00% semiannually. The bonds mature in 10 years. The current 10-year fixed versus SIFMA swap rate is 4.50%. The municipality can match the timing of the cash flows. In this scenario, the municipality will pay the floating rate and receive the 4.50% fixed rate. The net result is a synthetic floating-rate bond where the municipality pays SIFMA + 0.50%.



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Potential Risk: Using a Forward Delivery Swap as a Rate Lock

- Consider a municipality that will potentially need to borrow $50 million in 6 months. Interest rates are currently low. In order to lock-in a level of interest rates, the municipality enters into a swap that begins in 6 months. Under the terms of the swap, the municipality will pay the fixed rate and receive the floating rate.
- In 6 months, the swap begins. The municipality issues floating rate bonds and establishes a synthetic fixed rate financing at the swap rate.
- This should only be done if the bond issuance has been authorized, otherwise a swaption should be considered.

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PA School District Swap Market Overview

- Approximately 600 swaps outstanding
- Swaps have produced considerable savings for taxpayers over the years
- Very few problems in the municipal swap market relative to market breadth
- Some market turbulence was caused by credit issues in 2008; market has since settled
- Problems can be easily identified and avoided in the future

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Possible Risks

- Counterparty Risk – only sound counterparties should be used
- Basis Risk – can be avoided or hedged
- Issuance risk – a forward delivery swap should only be used if issuance is certain
- Liquidity Risk – amount of variable rate bonds associated with swaps should not hinder the liquidity facility

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Recommendations

- Do not eliminate the use of derivatives for districts as this would be costly and inefficient
- Do not mandate unwinding of existing swaps as this would be catastrophic for districts
- Guidelines developed in coordination with market experts and stakeholders with respect to liquidity and counterparty choice will avoid past mistakes
- Continual monitoring by outside parties
- Financial advisors should be independent parties
- Full disclosure of all risks prior to transaction
- Increased education of market participants

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Biography

Patrick Cusatis, Ph.D., CFA is Assistant Professor of Finance at Penn State Harrisburg. He joined Penn State Harrisburg full-time in 2002. Prior to joining Penn State, Dr. Cusatis was a Senior Vice President in charge of municipal derivatives and municipal remarketing at Tucker-Anthony. Before joining Tucker Anthony, Dr. Cusatis was a Director at CoreStates Bank and First Union National Bank, where he managed an investment portfolio in excess of $3 billion. Prior to joining First Union, Dr. Cusatis specialized in municipal new product development at Lehman Brothers in New York. Dr. Cusatis and his colleagues pioneered many of the derivative products in the municipal market.

Dr. Cusatis has published numerous articles in books and academic journals including *Journal of Financial Economics, Journal of Applied Corporate Finance, Journal of Futures Markets,* and *Municipal Finance Journal.* His research has been highlighted extensively in the financial press, including *The New York Times, The Wall Street Journal, Barron's, Fortune, Forbes, CNN, CNBC and Business Week.* He is co-author of two books on common stock valuation and two books on derivative securities. Dr. Cusatis received a B.S. in Finance and a Ph.D. in Finance and with a minor in Statistics from the Pennsylvania State University.

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