

SEC Hearing on The State of Municipal Securities Market
Birmingham, AL
July 29, 2011

Prepared Remarks of:

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My name is Andrew Kalotay. In 1990 I founded a debt management advisory firm with clients including the Tennessee Valley Authority and the Federal Farm Credit Banks. Previously I worked at Salomon Brothers and at Dillon Read in fixed income research, and before that I was at Bell Labs and at AT&T. My involvement in municipal finance goes back to 1979. I have a Ph.D. in mathematics from the University of Toronto, and I have taught graduate finance at Wharton, Columbia, and Fordham University. I was also the founding director of the graduate financial engineering program at Polytechnic University in 1995, and in 1997 I was inducted into the Fixed Income Analysts Society's Hall of Fame for my contributions to debt management.

I would like to thank Commissioner Walter and the SEC for inviting me to comment on the state of municipal derivatives. I believe that we stand at a crossroads where the SEC can have a significant impact by shining a light on the inefficiencies and waste that exist in municipal finance. I'm referring to what I see as Wall Street's multi-billion dollar hidden tax on Main Street, through poorly structured bond and swap transactions.

I'm not talking about fraud per se. The financial press understandably concentrates on the periodic blowups and perp walks arising from fiascos such as Jefferson County. I am referring to a much more pervasive problem that goes virtually unrecognized amidst the tales of incompetence and greed.

SLIDE 1

THE BOND BUYER
THE DAILY NEWSPAPER OF PUBLIC FINANCE

What Makes Muni Swaps So Special? Nothing, Actually

Friday, February 4, 2011
By Andrew Kalotay

Given the regular swap market, it may be worthwhile to identify what distinguishes it from the regular swap market.

In substance, these markets are basically the same. But there is a stark difference in practice: municipalities pay significantly more than other market participants for essentially the same product.

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... The swap dealer obviously will charge what the market will bear. Unfortunately, the municipality's grossly overcompensated hired guns — swap advisers, lawyers and such — provide inadequate protection and are conflicted by self-interest.

The swap dealer obviously will charge what the market will bear. Unfortunately, the municipality's grossly overcompensated hired guns — swap advisers, lawyers and such — provide inadequate protection and are conflicted by self-interest.

I have been a vocal critic of municipal finance practices for some time. As I said in a Bond Buyer article published earlier this year, swaps are badly mispriced against the municipalities. I will illustrate this with a recent transaction that I believe is typical, and then extrapolate the damage to a national scale. As you see, I put the blame for the current troubling state of affairs squarely on the municipalities' swap advisors, who are hopelessly conflicted.

The scales are tilted in favor of the banks due to the kind of arcane knowledge required to price these custom swap products. But the valuation of swaps is not rocket science; the market information and the analytical software are readily available. The problem with swap advisors is not the lack of technical expertise, but how they get compensated. The incentives are skewed: the deal must go through in order for the swap advisors to get paid. If we cannot force them by regulation to behave as true fiduciaries, then clearly they should not represent themselves as advisors — 'agents' or 'fixers' would be a more accurate appellation for their role in municipal finance.

Let me turn to a 30-year \$750 million variable-rate bond deal by Denver Public Schools in 2008, which has been extensively covered in the press. DPS swapped these bonds to fixed rate, with three major banks, on identical terms. Swaps packaged with variable-rate bonds are common in the municipal market, and they are aggressively promoted by the banks. The New York Times quoted me on March 8, 2010: "When municipalities enter into these swaps they end up paying more and receiving much less."

As an aside, this was a taxable bond deal, putting it in the same realm as corporate issues. To my knowledge, no respectable corporation has ever done such a deal. If this is such a good idea, wouldn't the banks use it to fund themselves? What is truly scary is that municipal issuers such as DPS don't seem to realize that they are unwitting guinea pigs in these dubious experiments.

Getting back to swaps, there is a key concept called 'fair value', which can be determined from the prevailing (observable) mid-market swap curve.

**ANDREW
KALOTAY**
ASSOCIATES, INC.

Bid-Ask Spreads for LIBOR Swaps Are Extremely Tight*

Term	2-Year	5-Year	10-Year	30-Year
Bid Rate (%)	0.659	1.830	3.068	3.895
Ask Rate (%)	0.665	1.833	3.070	3.898
Difference (%)	0.006	0.003	0.002	0.003

*Source: Bloomberg, July 12, 2011 4pm (YCRV <GO> S23)

As you can see from this slide, the difference between the bid and ask rates is very small, usually less than 1 basis point (100th of a percentage point). For example, the so-called bid-ask spread for a 10-year swap is two tenths of a basis point. I can tell you that our advisory clients routinely transact within one basis point of mid-market rates.

**ANDREW
KALOTAY**
ASSOCIATES, INC.

Reported Fair Value of Swap For Accounting Purposes Is 'Fair'

Flexible
Fast ACCURATE
Cutting-
EDGE
Accurate
CUTTING-EDGE
Flexible
Fast ACCURATE
Cutting-
EDGE
Accurate ACC
CUTTING-EDGE
Flexible
Fast ACCURATE
Cutting-
EDGE

Denver Public School District No. 1
Value of \$750 million 4.859% LIBOR swap as of June 30, 2010

Reported by banks*	\$142,866,925
Kalotay Fair Value	\$144,174,835
Difference	\$1,307,910
Difference as percent of notional amount	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 0.17% </div>

*Source: Denver School District No.1 Comprehensive Annual Financial Report 2010

This slide shows the fair value of the DPS swap as reported in its 2010 comprehensive annual financial report. Interest rates had moved against DPS; collectively, the three counterparties reported the fair value as approximately -\$143 million. This is very close to the value calculated by us; the difference is a mere 0.17% of the notional amount. The point to take away is that when it comes to fair value, there is consensus among experts.

Now let's take a look at the swap when it was executed in 2008.

**ANDREW
KALOTAY**
ASSOCIATES, INC.

**But Transacted Rate In 2008
Was Far From 'Fair'**

Denver Public School District No. 1
Value of \$750 million 4.859% LIBOR swap as of April 22, 2008

Perceived Value (to DPS)	0
Kalotay Fair Value	\$13,583,213*
Mark-up as percent of notional amount	1.81%

*Adjusted for \$550,000 paid by banks upfront to cover fees to swap advisor (\$425,000), swap counsel (\$100,000), and swap pricing agent (\$25,000). Source: Swap confirmation documents

Estimated fair coupon was 4.73%, nearly 13 basis points lower than that of actual swap

Here we see that at the time of entry, the value of the swap was about \$13.6 million, nearly 2% of the notional amount, against the school district. This does not include the \$425,000 expense paid to the so-called swap advisor, and another \$100,000 paid to the swap counsel. So the aggregate cost of the swap to Denver taxpayers at the time of execution was well in excess of \$14 million.

I believe that, in percentage terms, the economics of the DPS swap are typical. Let's estimate what this means on a national scale.

SLIDE 5

ANDREW KALOTAY ASSOCIATES, INC.

Hidden Tax of Municipal Swaps On a National Scale

Estimated notional amount of swap transactions in last 5 years: \$1 trillion

According to MSRB report of April 2009, annual municipal derivatives volume grew to \$300 billion

Mark-up to fair value: 2% of notional amount

Cost to taxpayers: \$20 billion
2% of \$1 trillion

The slide features a vertical sidebar on the left with a repeating pattern of the words 'Flexible', 'Fast', 'Accurate', and 'Cutting-edge' in various fonts and colors. A yellow highlight box surrounds the 'Cost to taxpayers' text.

I conservatively assumed that \$1 trillion municipal swap transactions occurred in the last 5 years, including many unwinds, where the municipalities are also overcharged (they get you coming and going). Assuming a 2% mark-up, the hidden cost of swaps to the taxpayers on a national scale adds up to \$20 billion.

The banks tend to defend their profit margin by claiming exposure to municipal credit risk. But what is the justification for a high margin on unwinding, when credit risk is non-existent?

ANDREW KALOTAY ASSOCIATES, INC.	Suggestions to Improve Transparency in Municipal Finance
	Disclosure <ul style="list-style-type: none">Standardize swap advisory contract<ul style="list-style-type: none">Require disclosure of side agreementsReport <i>swap curve</i> at time of transaction<ul style="list-style-type: none">In the same vein as CFTC's proposal for disclosure of mid-market value by dealer (under Dodd-Frank)Create a Municipal Finance Protection Bureau to assist with contemplated transactionsProvide fair value of swapsHelp with structuring and refunding of bonds<ul style="list-style-type: none">Cost of wasteful practices is enormous on a national scale

So what to do? Swap valuation is not in the skill set of most municipal decision-makers, and swap advisors have not served them well. As Justice Louis Brandeis said in his book, *Other People's Money*, "sunlight is the best of disinfectants; electric light the best policeman." In that spirit, at a minimum, the banks should be required to disclose the swap curve at the time of execution. Also, any side agreements with the swap advisor should be disclosed as a matter of course. More broadly, perhaps a Municipal Finance Protection Bureau should be set up to provide municipalities with fair values of swaps, on demand, prior to entry or exit. It will be a step in the right direction but I would be naïve to assume that it would solve the whole problem.

I thank you for your time and hope that some of the ideas in my talk will be of use.

[A more detailed examination of the 2008 Denver Public Schools transaction is attached]

*Appendix to Prepared Remarks of Andrew Kalotay
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**Case Study: Denver Public Schools (DPS) -
\$750 Million Variable Rate Taxable Bonds Swapped to Fixed -**

Background

I first heard of this transaction through a 2010 interview by Gretchen Morgenson of the New York Times. Here is what I said:

“... a deal like Denver’s would be highly unusual among private sector issuers like corporations ... I’m not aware of any corporations trying to get a better fixed rate by issuing long-term instruments such as those used by Denver. Why would the school district want to do this transaction with all the attendant risks of mispricing and the possibility of unfavorable unwind costs when they could have done a conventional, taxable fixed-rate deal?”

(New York Times, August 5, 2010)

I became interested in this deal when someone on the Denver Public Schools board subsequently asked me to elaborate.

Structured Variable Rate Bond Transactions

In April 2008 DPS issued \$750 million of 30-year variable-rate amortizing bonds. The bonds had to be remarketed periodically (every 7 days or every month, depending on the ‘interest rate mode’ chosen by DPS); such bonds require a remarketing agent and a liquidity provider (both collecting ongoing fees). In the event a remarketing fails, the liquidity provider steps in and buys the bonds but typically charges an exorbitant interest rate. In the DPS case, the rate was 9% per annum for the first remarketing failure. *(Denver Business Journal, August 15, 2010).*

The interest rate of a remarketable issue varies over time, due to changing market conditions and possibly due to issuer-specific developments. Because DPS’s ultimate objective was to lock in a fixed rate over time, it entered into a \$750 million LIBOR-based interest rate swap whose amortization structure mirrored that of the bond issue. In this swap DPS paid a fixed 4.859% rate and received in exchange the 1-month LIBOR rate.

While the focus of this note is on swaps, first a few words are in order regarding the basic structure of this transaction, i.e. issuing variable rate bonds and then ‘fixing’ them via an interest rate swap. Until recently, such transactions were common in municipal finance. The volume of tax-exempt variable rate bonds issued during the past 5 years is over \$1 trillion, and I assume that most of these were swapped.

As I said in my August 5, 2010 *New York Times* interview, I consider these transactions unsuitable for long-term funding: they are much too risky, not to mention the fact that they entail considerable ongoing servicing costs. For example, the term of the agreement with the liquidity provider normally runs for only 2

or 3 years, while the maturity of the bonds may be 30 years. In the absence of a new liquidity provider, the deal could blow up. (This was in fact the subject of Ms. Morgenson’s *New York Times* article; DPS’s liquidity provider Dexia was experiencing severe financial problems).

If the variable-rate bonds are insured (as used to be the norm) the bonds’ interest rate depends on the credit of the insurance company. If the insurance company subsequently runs into problems, the market will charge a higher rate on remarketing. In extreme cases, when there is no market demand for the bonds, the issuer may have to pay a double-digit interest rate to the liquidity provider to keep the bonds alive. It was the downfall of the bond insurance companies, as a result of the 2008 financial crisis, that essentially shut the door on these transactions.

Taxable DPS Deal Has No Analog Among Corporate Issues

DPS Board President Nate Easley, Jr., in a letter to board members, called the 2008 deal “far from exotic,” saying it was structured exactly like a 2005 transaction. He continues, “Despite the high-pitched rhetoric currently surrounding the issue, the financing structure the district used is very commonly employed. Over 100 public entities in Colorado have issued over 500 variable-rate issues in the last decade alone.” (*Bond Buyer*, August 12, 2010).

But the DPS transactions in 2005 and 2008 were fundamentally different from the typical municipal debt deal: the DPS bonds were taxable, putting them in the same realm as corporate (taxable) debt. To my knowledge, no respectable corporation has done such a deal. Nor have the banks who propose such deals as a way to achieve interest savings used such transactions for their own funding needs. Apparently, DPS was an unwitting guinea pig in these risky funding experiments.

Why would investment banks pitch such a complex and risky deal to a school district, but not to the more sophisticated corporate issuers? The answer, in my opinion, is that their primary goal is to put municipalities into swaps, where the mark-ups are usually in the 2% range. That would not work with more savvy corporate issuers.

Analysis of the DPS Swap

Let us take a closer look at the \$750 million 4.859% interest rate swap executed by DPS in 2008. Actually there were three individual swaps, with three different counterparties. The swaps had exactly the same terms, except that the notional amounts differed, as shown in Table 1 below.

Table 1: Counterparties to \$750 million DPS Swap

Counterparty	JP Morgan	Bank of America	Royal Bank of Canada
Notional Amount of Swap	\$450,000,000	\$200,000,000	\$100,000,000

The so-called fair values of swaps need to be reported for accounting purposes periodically. Municipalities presumably obtain estimates of these fair values directly from their counterparties. **DPS's 2010 comprehensive annual financial report** shows the fair values of the swap totaling \$142,866,925 against DPS (rates declined between April 2008 and June 2010). Our own analysis indicates a fair value of \$144,174,835, which differs by just 0.17% of notional amount. *So when it comes to estimating fair value there is virtual agreement among experts.*

What was the value of the DPS transaction at inception? Our calculation, based on the swap curve at the close of business on April 22, 2008, indicates \$13,583,213 *against DPS, or almost 2% of notional amount.* And this does not include the fees paid to the swap adviser (\$425,000), swap pricing agent (\$25,000) and swap counsel (\$100,000). As an aside, the role of swap adviser was assumed by one of the banks that also participated in the deal, after having received a 'conflict waiver'.

The Chickens Come Home to Roost

In the *Denver Business Journal* of August 15, 2010, the superintendent, Tom Boasberg, indicated that in April 2008 DPS could have issued fixed rate debt, presumably with the same amortizing structure as the variable rate bonds, at about 7.25% — supposedly the bogey to beat. My own review of market levels at that time point to much lower funding rates for issuers of DPS's credit, assuming a debt structure with an average life of about 22 years. (Because of the amortizing nature of the DPS issue, its average life was shorter than the stated maturity.)

However, as discussed above, instead of issuing fixed rate bonds, DPS entered into the complex variable rate bond transaction overlaid with a swap. Dexia, a Franco-Belgian bank, acted as liquidity provider.

According to the *Denver Business Journal* of August 15, 2010, both Dexia and the bond insurer Financial Security Assurance Inc. were downgraded during the mortgage crisis in 2008. Investors were "spooked" and "... DPS ended up paying nearly \$25 million more in interest costs and fees in the 2008-09 school year than it had budgeted for."

The *Bond Buyer* article of August 12, 2010, quoted Standard & Poor's rating analysts as saying, "The district's recent all-in costs, including the spread over one-month Libor, and remarketing and letter-of-credit fees, have been as high as 7.10%, but this is still under its budgeted interest cost of 7.50%, according to the district." It is unclear how the budgeted 7.50% relates to the 7.25% mentioned by Tom Boasberg.

Faced with the expiration of the liquidity provider contract in April 2011, the DPS board voted to unwind part of the swap with one of the counterparties, at a cost of \$41.7 million. DPS decided to refinance the entire 2008 issue with proceeds from \$396,045,000 of new variable debt swapped in the same manner as before, and \$396,235,000 of new fixed rate debt. The issuance costs to financial and swap advisors, rating agencies, lawyers, et al, but *not* underwriting fees totaled \$2.6 million. The size of the new debt is \$792,280,000 (\$42.28 million more than the original size of \$750 million); consequently DPS had to put up additional buildings as collateral.

(Source: *Denver Public Schools documents*).

Recommendations

In spite of the claims of DPS officials, it appears that a fixed rate deal in April 2008 (not to mention in 2005) would have been preferable. The myriad add-on costs and risks associated with the complex variable rate issue combined with a swap should have given DPS pause.

What can be done to make municipalities aware of the true costs and risks of getting into these complex deals? Perhaps it is time for a Municipal Finance Protection Bureau with at least the following functions.

- Provide fair values of swaps to municipalities prior to entry or exit, so that they know how much they are being overcharged
- Randomly sample swaps done by various municipalities to quantify mark-ups
- Award an annual prize to the municipality with the best-executed swap, based on submissions

These suggestions may nudge municipal finance in the right direction but one would be naïve to expect too much.