

CRA Insights: Credit Crisis

May 2008

In this issue

Since late 2007, investors in auction rate securities have faced problems selling their holdings due to lack of market liquidity. As a result, a number of securities class action lawsuits have recently been filed on behalf of investors. This briefing provides background and analysis on the auction rate security market, recent liquidity problems, and the resulting litigation.

The authors:

Mukarram Attari
Vice President
+1-510-595-2711
mattari@crai.com

Aaron Dolgoff
Principal
+1-617-425-3623
adolgoff@crai.com

E. Scott Mayfield
Vice President and
Practice Leader of Financial Markets
+1-617-425-3335
smayfield@crai.com

Litigation Implications of the Auction Rate Security Market Freeze

What are auction rate securities?

Auction rate securities (ARS) are bonds or preferred stock whose coupons or dividends are reset periodically through auctions. The securities are purchased and sold at par value, and Dutch auctions are used to set the interest rate at a level high enough to clear the market. Auctions are held at regular intervals, typically every 7, 28, or 35 days. If an auction fails to clear (insufficient bids to cover sellers), ARS interest rates are set according to methods specified in the security prospectus. Auction rate bonds typically have long-term maturities of up to 30 years while auction rate preferred stocks have no maturity dates at all. ARS also typically have bond insurer backing to improve their credit rating.

ARS are liquid only on auction dates—there is no active market for the securities except within the auction process or through redemption by the issuers. Bidders submit the number of securities they wish to hold and the minimum interest rate they will accept. The auction rate is set high enough so that there are buyers for those wishing to sell. The auction manager typically receives a 0.25% annual fee from the issuer. An auction fails to clear when there are insufficient bids to cover sellers. Failed auctions result in interest rates set according to pre-determined rules. Most municipal issuers put in place high interest rate caps (as high as 20%) for failed auctions. Some issuers such as closed-end mutual funds have much lower interest rate caps, often based on market benchmarks (e.g., a spread above commercial paper, LIBOR, or other index rates).

Issuers of ARS tend to be municipalities, non-profit hospitals, utilities, housing finance agencies, and student loan finance authorities. In recent years, increasing numbers of closed-end mutual funds and some corporations have also issued ARS. Closed-end funds have been the primary issuers of auction rate preferred stock. When ARS were first introduced in 1984, the market was restricted to institutional investors with minimum investments of \$250,000. Later, minimum investments were decreased to \$25,000, opening up the market to high net worth individuals.

Issuers were attracted to offering ARS instead of other variable rate securities because of several key ARS features. Specifically, ARS lack “put” features allowing investors to sell them back to the issuer if rates decline, do not require a letter-of-credit, and do not require annual short-term bond ratings. The latter two features can lower the ongoing annual cost to the issuer relative to other securities types. Two other important features common to many ARS are conversion and call provisions. “Multi-modal” conversion features allow the issuer, with some notice, to convert the coupon rate determination from an auction procedure to another mode, giving the issuer the option to convert the security into more traditional long-term fixed or variable rate securities. Call provisions allow the issuer to redeem the securities at par value, providing the flexibility to refinance as needed.

The par value of ARS outstanding has been estimated at around \$330 billion as of the beginning of 2008. The majority of outstanding ARS were issued by municipalities while an estimated \$63 billion was issued by closed-end mutual funds. Major underwriters for ARS offerings include UBS, Citigroup, Merrill Lynch, and Banc of America. Figure 1 shows the ten most active brokers behind ARS issuance since 2000. Brokers acting as auction agents need not be the same as the underwriters though data are not available on the market shares of auction agents.

Failed auctions

Historically, very few ARS auctions failed to clear. When insufficient bids were received, broker dealers would step in with their own bids so that auctions would clear. Moody's reported that only 44 auctions failed between 1984 and the end of 2007. In the latter half of 2007, some auctions for ARS backed by subprime mortgage debt failed, but these represented a very small part of the total market.

On February 13, 2008, reportedly 80% of ARS auctions failed, covering approximately \$29 billion in par value. Many major broker-dealers decided to stop supporting the auctions through their own purchases. The average rate on 7-day auction bonds rose to 6.59% from 4.03% the previous week. By February 20, the percentage of failed auctions declined to 66%. As yields on ARS rose, hedge funds and other investors began stepping in to meet unmet demand, leading to lower auction rates. For example, a failed auction for ARS issued by the Port Authority of New York resulted in a 20% rate that subsequently declined to 8%. However, as of this writing, high rates of auction failure

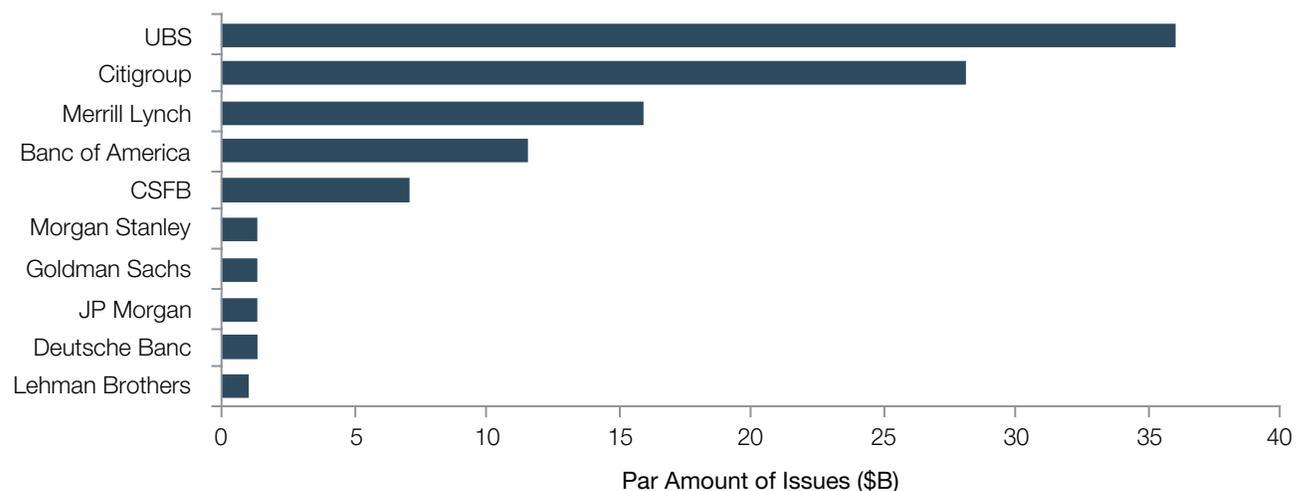
continue despite higher yields being offered to potential buyers.

The Securities Industry and Financial Markets Association (SIFMA) tracks the results of auctions for various types of ARS securities. To show the impact of failed auctions on ARS yields, Figure 2 charts the difference in yield on 7-day ARS tax-free municipal securities and swap rates on 7-day variable rate debt obligations (which have similar variable, tax-exempt yields as the ARS securities, though VRDOs have put provisions and are freely traded without auction procedures). Until late 2007, ARS securities provided approximately the same yield as similar VRDOs. The yield premium that ARS investors earned spiked rapidly in February 2008 as auction failures became common.

Contemporaneous accounts suggest several factors contributing to auction failures and increases in ARS yield spreads. The initial factor was likely the increase in municipal default risk caused by subprime mortgage problems, recessionary fears, and general credit market dislocations. Increased default risks were exacerbated by concerns about the financial health of bond insurers whose AAA ratings were being questioned in late 2007 and early 2008. The absence of put provisions makes ARS rates particularly sensitive to default risk as judged by the financial condition of the issuer and the bond insurer.

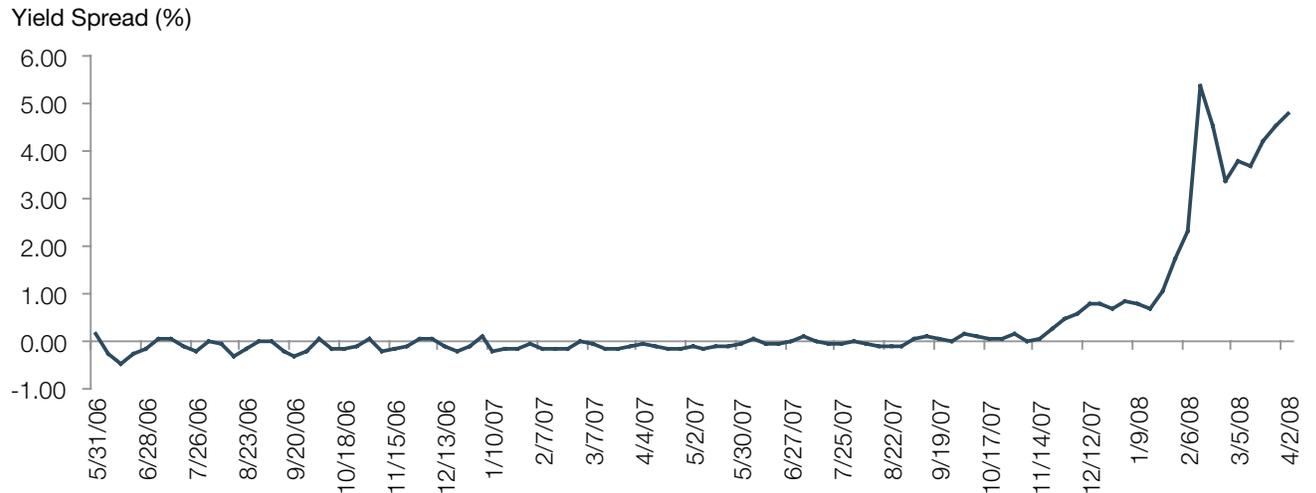
The pressure on bids for ARS was exacerbated by the continuing "deleveraging" of banks' balance sheets in the wake of the subprime mortgage crisis. Weakened balance sheets led ARS dealers to withhold their own bids from the auctions—that is, auction dealers lacked the capacity

Figure 1: Top 10 Issuing Brokers of ARS (2000-2007)



Source: Thomson Financial

Figure 2: Spread between SIFMA ARS 7-day Index and SIFMA VRDO 7-day Index



Source: Securities Industry and Financial Markets Association

or willingness to take increasing risk exposures to ARS securities. Although brokers' total ARS exposure is currently unknown, UBS disclosed on April 1, 2008, that its position in these securities increased from \$5.9 billion to \$11 billion since December 31, 2007, suggesting that it rapidly increased its own position in the first six weeks of 2008 prior to ending its auction support.

Features typical to many ARS contributed to the spike in yields. Unlike typical floating rate securities, ARS interest payments adjust for both changes in interest rates and changes in default risk. Without put provisions, investors could not sell the securities back to the issuer. "Multi-modal" conversion features raised the probability that variable rate securities would be transformed into long-term fixed rate bonds or other securities whose value might differ significantly from that of an ARS. The increased budgetary strain caused by increased financing costs likely raised default risk for ARS issuers even higher. Mitigating against higher yields may have been some expectation by investors that issuers would redeem the securities.

In the wake of continuing high levels of auction failure, on March 28, 2008, UBS announced that it was lowering its valuation of its customers' ARS holdings by 5% overall (and by up to 20% for certain securities based on an internal computer model). Goldman Sachs has reportedly also marked down the value of its clients' ARS assets though other brokers have not yet done so. Some brokers have offered ARS-backed loans to clients with immediate cash needs. Municipalities faced with higher financing costs have responded by issuing traditional securities in order to retire

outstanding auction rate securities and exercising conversion provisions to switch from auction procedures to other modes of setting interest rates. Two large issuers of auction rate preferred securities, Nuveen Investments and Eaton Vance, have thus far announced redemptions of \$715 million and \$1.6 billion, respectively.

ARS litigation

Lawsuits relating to ARS have recently been filed against several major brokers by investors who held through the recent market turmoil of failed auctions. The named investor plaintiffs are primarily high net worth retail investors though the potential class of plaintiffs would include corporate/institutional investors who purchased ARS as part of ongoing cash management operations. Plaintiff allegations focus on the risk of ARS securities, claiming that brokers misrepresented the investments as risk-free, cash-like (liquid) investments.

Table 1

Defendants in ARS-related 10(b)-5 Class Action Lawsuits as of April 15, 2008	
Citigroup	Oppenheimer & Co.
Deutsche Bank	Raymond James
E*Trade Financial	TD Ameritrade
JP Morgan Chase	UBS
Merrill Lynch	Wachovia
Morgan Stanley	Wells Fargo

In addition to the 10(b)-5 class action lawsuits listed in Table 1, various other ARS class and individual actions have been filed against broker dealers, underwriters and issuers. An example of other class action litigation is a Section 11 claim filed against the Calamos Global Dynamic Income Fund (a closed-end fund), Wachovia and Citigroup alleging a false and misleading registration statement for auction rate preferred shares issued by Calamos. Among other individual actions is an investor's complaint alleging that Wells Fargo represented ARS as bonds "without risk."

Plaintiffs support their allegation that broker dealers misrepresented the risk of investing in ARS with the allegation that auctions would have frequently failed in the absence of broker intervention. Plaintiffs thus claim that brokers' support for the auctions facilitated their marketing of ARS as low risk, cash-like investments.

Defendant liability may depend on whether banks' disclosures about the risks of these securities were adequate. After a 2006 SEC order found that broker dealers violated securities laws in their management of ARS auctions, firms have been required to disclose their auction procedures, including a disclosure that they may place bids on behalf of proprietary accounts using insider knowledge. However, dealers do not have to disclose how frequently they placed bids or at what quantities. Plaintiffs are now alleging that dealers effectively sustained the market through their own bids, concealing the lack of demand for these securities. Only when the credit market troubles in 2007 to 2008 caused the dealers to stop placing their own bids did liquidity for ARS dry up. Defendants may argue against scienter claims based on the increase in their ARS positions prior to their February 2008 decisions to cease placing their own auction bids.

CRA has extensive expertise in:

- Analysis of auctions used to set rates on ARS
- Valuing illiquid fixed income securities
- Causation and damages analysis in securities litigation

Defendants may also argue that investors were aware of the liquidity risks associated with ARS. The risks of auction failure were disclosed in ARS prospectuses available to any investor. Although dealers were allowed to intervene in auctions, they were under no obligation to do so. In addition, institutional plaintiffs' claims that ARS were misrepresented as cash-equivalent investments may be undermined by the accounting treatment of these securities. In March 2005, PricewaterhouseCoopers (PwC) issued an advisory letter highlighting ARS risks such as auction failures. PwC concluded that "such securities will not qualify as cash equivalents" due to their long term contractual maturity. PwC indicated that such classification was consistent with the views of regulatory bodies such as the FASB and the SEC. All other Big Four accounting firms reportedly followed suit.

Plaintiff damages claims are unclear at this point. Lack of liquidity prevented investors from selling, but resulting losses are mitigated by both higher rates earned on ARS positions and access to ARS-backed lending provided by brokerages. For plaintiffs without immediate needs for access to cash, damages may depend on the return earned on holding ARS as compared with comparable risk investments. Plaintiffs who had a need to sell their holdings for other purposes may claim damages due to lost opportunities or other costs incurred as a result of lack of access to funds (e.g., interest costs for borrowing funds until the next auction clears).

The valuation by UBS and Goldman Sachs of their clients' ARS assets at an approximately 5% discount to par provides an estimate of value in the absence of market prices for the securities. The 5% discount suggests total capital losses of \$16.5 billion on a total market size of \$330 billion though it is unclear whether the banks' valuation discounts reflect temporary liquidity problems or factors like default risk. Valuations and losses will vary significantly across ARS securities, depending on both issuer and security-specific factors affecting auction failure rate, expected default risk, probability of redemption or conversion, and the yield earned by holders of the securities.

Additional litigation may also result from ARS issuers faced with higher-than-expected financing costs who are unable to refinance or convert ARS securities to lower cost securities. Refinancing ARS securities may be problematic for some municipalities due to the higher cost (or unavailability) of bond insurance, deteriorated credit ratings caused by economic conditions, and legal or regulatory obstacles to issuing new securities.

Credit Crisis Task Force

The full magnitude and impact of the current economic crisis are not yet known. But undoubtedly, the effects on both financial institutions and global business will be profound and lasting. To provide insight into the complex issues raised by the current crisis, CRA has formed a multi-disciplinary Credit Crisis Task Force. We have the expertise to help you both understand the issues and advise you on how best to address them.

CRA International

CRA International is a leading global consulting firm that offers economic, financial, and business management expertise to major law firms, industries, accounting firms, and governments around the world.

With proven skills and exceptional strength in analytics, CRA consultants provide astute guidance in complex cases. We have helped clients achieve successful outcomes in thousands of engagements involving litigation and regulatory support, business strategy and planning, policy analysis, and risk management consulting.

Our success stems from the outstanding capabilities of our consultants, many of whom are recognized as experts in their respective fields; our close relationships with a select group of respected academic and industry experts; and our corporate philosophy, which stresses interdisciplinary collaboration and responsive service.

CRA's consultants combine uncommon intellectual acumen with practical experience and in-depth understanding of industries and markets. We are adept at handling tough assignments with pivotal and high-stakes outcomes. Our analytical strength enables us to reach objective, factual conclusions that help our clients make important business and policy decisions and resolve critical disputes.

Founded in 1965, CRA has headquarters in Boston and 26 offices across North America, Europe, Asia Pacific, and the Middle East.

www.crai.com

Contact

For additional information about how CRA's Credit Crisis Task Force can help you, please contact:

Boston

617-425-3000

Tom Blake

Bala Dharan

Paul Maleh

Scott Mayfield

Brad Miller

Stephen O'Neil

Chicago

312-357-1000

Elizabeth Davis

Mike Mayer

Bjørn Pettersen

New York

212-520-7100

David Babbel

Alan Friedman

Mark Meyer

Oakland

510-595-2700

Mukarram Attari

Pasadena

626-564-2000

Brian Palmer

Toronto

416-413-4070

Frank Mathewson

Washington, DC

202-662-3800

Marsha Courchane