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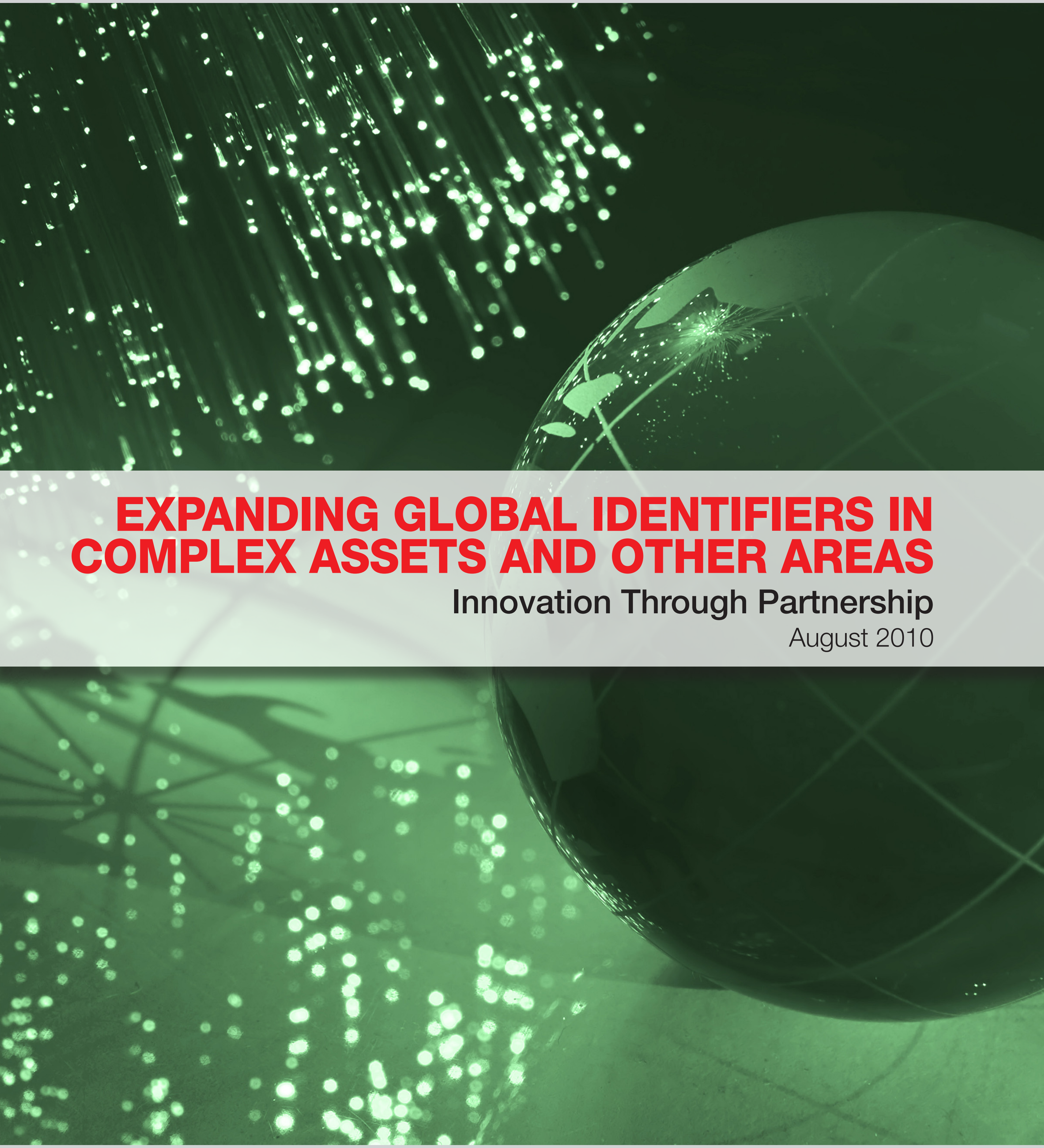

EXPANDING GLOBAL IDENTIFIERS IN COMPLEX ASSETS AND OTHER AREAS

Innovation Through Partnership

August 2010

An industry briefing prepared by **A-Team Group** for

CUSIP GLOBAL SERVICES

Experience • Process
Technology • Innovation

Executive Summary

In the post-credit crisis financial services industry, risk management, compliance and transparency have emerged as focus points for review with provision of accurate and timely data recognised as a critical element of success. Fundamental to data provision is the accurate identification of both financial instruments and counterparties – without which you cannot truly measure your performance or exposure.

> "Can commercial initiatives and innovation through partnerships succeed where standards bodies have so far failed?"

Rapid growth in derivatives and securitised debt instruments played a central role in the credit crisis. In the aftermath of the crisis, the use of alternative asset classes has continued to grow. In order to ensure that an individual firm's exposure through such complex instruments can be accurately measured, and therefore, managed, that firm must be able to correctly identify the securities and the entities that they are investing in.

This can only be done through the use of unique identifiers. But it is a well known fact that there is no single identifier capable of uniquely identifying securities or entities globally. While there are countries with identifier schemas, or certain asset classes such as equities that are well covered, there are many regions, asset classes, and markets that do not have a robust mechanism for identifying securities and entities. Despite significant effort, the industry has not been able to progress a standardised approach to this problem.

Is there another way? Can commercial initiatives and innovation through partnerships succeed where standards bodies have so far failed?

We examine the industry requirements and complexities inherent in the application of unique identifiers in three key areas: Business Entity Identifiers, US Listed Options and Syndicated Loans and review the collaborative approach taken by Standard & Poor's CUSIP Global Services to develop innovative and comprehensive industry solutions.

Risk Management – The New Business Imperative

As the financial services industry works through the aftermath of the credit crisis, there has been renewed focus on risk management across the industry, from capital adequacy and management of liquidity risk to an upgrading of counterparty risk analysis and measurement and to the extension of central counterparty (CCP) facilities to additional instruments.

Alongside the growing importance of risk management there is an emerging recognition of the critical role played by reference data and market data. Sound risk management is dependent on the provision of timely and accurate data, from the structure of complex debt instruments to the split-second pricing of a stock on a dozen exchanges and alternative trading platforms. The financial markets' expectation is that the data will be there – accurate and on time.

Perhaps less well recognised is the dependency of market and reference data on the accurate identification of financial instruments and counterparties. "What are we trading?" and "Who are we trading with?" If not always spoken, these are the fundamental questions underlying all capital markets transactions.

In response to the question "Who are we trading with?" the financial services industry has recognised the need for a standard business entity identifier as a fundamental requirement for accurate counterparty risk management. A March 2009 industry briefing, Business Entity Identifiers, prepared by A-Team Group for Standard & Poor's, analysed the critical requirement and ongoing global initiatives to create business entity identifiers and highlighted the lengthy and as yet unresolved process of agreeing a standard format among industry bodies. It also pointed to the collaboration among organisations with demonstrated expertise in providing data sets and identifiers, moving toward a practical solution, efforts which are still continuing.

"What are we trading?"In the world of equities and fixed income securities, the industry has become accustomed to the accurate and consistent identification of instruments through the application of unique identifiers. The credit crisis has served to highlight both the benefits of unique identifiers in the trading, clearing and settlement of financial instruments worldwide and the risks inherent in the operation of financial markets lacking the consistent application of unique identifiers.

Without the consistent application of unique identifiers, the risk of error is significantly increased throughout the instrument's lifecycle, from pre-trade valuation, through trading, clearing and settlement to post-trade valuation. The absence of an accepted, verifiable standard to readily identify the key characteristics of an instrument mandates a reliance on laborious manual processes with the potential for increased error rates and an inability to react quickly and efficiently to new requirements in monitoring and reporting.

Effective risk management is dependent on the ability to aggregate exposures relevant to market, credit or liquidity risk, a task made less reliable, less flexible and significantly more time-consuming without the consistent application of unique identifiers. The increasingly demanding regulatory requirements in areas such as the management of liquidity risk mandates a rapid expansion on the use of unique identifiers in non-traditional areas such as OTC derivatives instruments.

Beyond Equities and Bonds – The Critical Need for Unique Identifiers

Since the 1960's the financial world has come to expect certainty in the identification of equity and bond instruments. There are 78 national numbering systems in place, and through the Association of National Numbering Agencies (ANNA) these numbering systems contribute to the ISIN (International Securities Identification Number) aimed at facilitating global identification and processing of securities.

There are also other prominent national numbering systems including the US's CUSIP, the UK's Sedol identifier, the Swiss Valorens identifier and the French Sicovam.

While some of these numbering systems reach beyond equities and bonds – with coverage of Certificates of Deposit (CDs), commercial paper, medium term notes, IPOs, funds, competitive/negotiated deals and private placement markets and more – the fall out of the credit crisis highlighted the gaps in many other areas of coverage of identifiers.

For example, the rapid growth in markets for derivatives and securitised debt instruments without the underlying identifiers caused serious problems as firms grappled with their systems to understand their true exposure and therefore the likely impact to their business of the collapse of entities such as Lehman Brothers. In many cases it took weeks and months to gather data to unravel the structure of their investments and then trace them to the right entity.

Governments and regulators are now trying to put in place a regulatory framework to ensure that the same level of catastrophe cannot be repeated. And the smart financial institutions have recognized that building smarter and more resilient risk management processes will enable more accurate measurement and therefore better ability to manage their exposure. And as a result we are seeing increased investment in securities identifiers beyond the traditional equities and bonds and security to entity linkages as the fundamental building block of these processes.

There is now a real appetite for extending the application of unique identifiers to additional markets with new and complex identification criteria. For example, there is broad industry consensus on the need to increase transparency and minimise the risks inherent in the derivatives markets. In the United States regulators have supported the view that OTC derivatives markets should be reorganised into an exchange structure. While this approach has been strongly criticised by the Wholesale Market Brokers Association (WMBA) and other industry bodies, there has been broader acceptance of the concept that all derivatives transactions (including OTC transactions) be cleared through a central counterparty (CCP).Credit Default Swaps (CDS), regarded as one of the key reasons for the scale of the debt crisis, have received particular attention and centralised clearing for single name CDS contracts was initiated during 2009 through both the CME Group and Intercontinental Exchange (ICE).

Whether derivatives are traded on exchange or through OTC markets, efficient and secure trading, clearing and settlement is dependent on the application of unique identifiers with sufficient capacity and flexibility to handle the complexities inherent in the instruments. For example, Credit Default Swaps (CDS) have been identified by the arranging dealer, using varying methodologies rather than assigned by issuing agencies. Accurate identification of CDS instruments requires a complex range of criteria including reference entity, tier, currency, restructuring type, trade date, maturity date and initial spread.

Reference Entity Database (RED) codes are critical to identification of the instrument and are becoming standard, but are not yet universally applied.

The complexity of this requirement is evident in the Options Price Reporting Authority (Opra) development of a new standard for the dissemination of transaction pricing and quotes for US exchange traded options. Discussions through 2008 led to the selection of the Options Clearing Corporation (OCC) as designated operator of a centralised database of securities symbols for exchange traded options.

OCC recognised the limitations of the identification system applied to exchange listed options (a three to five alpha character system initiated more than 25 years ago) and since 2005 has organised an industry initiative to develop a new identification standard, which will involve a 21 digit identification code.

During 2008 the Financial Information Forum (FIF) reported that the cost to the industry (not including buy-side or custodian related costs) of implementing a new standard would reach an estimated $250 million. FIF reported, based on survey results, that most firms are able to store only nine or twelve digit identification codes and will have to create proprietary identifiers for operational purposes. Asked to evaluate approaches from a range of vendors, 39% of respondents indicated they would use proprietary codes created by CUSIP Global Services, with 9% of respondents opting for other vendor solutions and 17% indicating they would continue to use internal identifiers (35% were uncertain or did not respond).

This level of complexity points to the challenges the industry faces in tackling identifiers for OTC instruments, which are typically less standardised than exchange –traded instruments.

If derivatives are dependent on provision of improved identification codes to support initiatives aimed at greater transparency and risk reduction, other areas like hedge funds have developed without any application of unique identifiers. Hedge funds are regarded as taking high risks in a highly leveraged environment and are considered to have played a role in accelerating the effects of the crisis through asset sales and significant withdrawals of market liquidity.

As a result of their effect on the financial markets and on systemically important financial institutions such as the prime brokers, hedge funds have become subject to increasing demands for increased regulatory supervision, both direct and indirect. Coupled with a recognized need for improved efficiency in administrative processes and for improved transparency from an investor perspective, particularly in relation to funds of funds, the case for application of unique identifiers in the hedge fund industry becomes overwhelming.

In the absence of unique identifiers, accurate identification and classification of hedge fund (and and their underlying classes) investments remains a manual, time-consuming task which is compounded in the case of fund of funds investments. In turn, this has significant systemic risk implications given the concentrated risk positions of leading broker-dealers to the hedge fund world.

The Response: Innovation through Partnership

The financial services industry has recognised the critical need to apply unique identifiers to an increasing range of financial markets, enabling the consistent and timely application of data to improve risk management and facilitate the introduction of data repositories, Central Counterparties (CCPs) and other services. The application of unique identifiers in derivatives and securitised debt markets involves new and challenging identification criteria, driven by the complex nature of the instruments involved.

To meet these challenges, Standard & Poor's (S&P) through its CUSIP Global Services (CGS) have entered a series of innovative partnerships with specialist data providers, industry bodies and clients with the goal of addressing the lack of unique identifiers within key business areas, asset classes, and geographical regions.

In this section we examine three key initiatives where S&P identified the opportunity to underpin financial markets and has worked with industry partners to introduce or to improve existing identifiers: Business Entity Identifiers, US Listed Options and Syndicated Loans.

Business Entity Identifiers

The credit crisis highlighted the financial services industry's vulnerability to the collapse of one or more major financial institutions, exposing a degree of interdependency not fully understood prior to the crisis. For example, many firms did not realise they were holding paper originally issued by Lehman Brothers or one of its multiple subsidiaries or affiliates; more than 11,000 active instruments were related to Lehman Brothers at the time of its collapse in September, 2008. The lack of accurate quantification of exposure resulted from the absence of a universal identifier for business entities. Following the credit crisis, the industry recognised that a universal identifier was required to tie-in issuers, obligors, counterparties and guarantors –all the elements of risk exposure relevant a business entity.

While actively supporting the various standards initiatives working toward a longer-term industry solution, Standard & Poor's through CUSIP Global Services recognised the need for an immediate industry solution and commenced a collaborative dialogue with Avox, a specialist in global entity data and a member of the Deutsche Bose Group. Avox deploys a unique operational model in which clients, including major banks and investment managers, contribute data for validation, correction, enrichment and maintenance by Avox.

Ken Price, CEO and co-founder of Avox explains the rationale for the resulting partnership with CGS: "It quickly became evident that both parties fully understood the scale and complexity of the challenge facing the industry, and brought fundamental strengths to meeting the challenge. CUSIP Global Services has contributed expertise and experience in the application of unique identifiers while Avox has contributed expertise in client driven global entity data".

In April 2009 CUSIP Global Services and Avox announced an alliance to create a universal identification system for global business entities. Known as "CABRE" (CUSIP Avox Business Reference Entity identifier) the new system encompasses issuers, obligors and counterparties globally. CABRE is a 10 character code available to market participants through a range of distribution options including portfolio, bulk-file and web-based applications.

Ken Price of Avox comments that “the product is working as planned and is well received by the industry. CABRE is being applied to an ever-widening database of business entities and illustrates the value of innovation through industry partnerships”.

U.S. Listed Equity Options

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In response to a clear market demand for a new listed US Options identifier, CUSIP Global Services leveraged its alliance with FOW TRADEdata, a United Kingdom based specialist supplier of futures and options information. Mark Woolfenden, Managing Director, FOW TRADEdata explained that “the industry needed a comprehensive and efficient identification system for listed US equity options to underpin clearing, settlement and risk management for a rapidly growing asset class. Listed equity options are complex and dynamic, bringing significant challenges to the application of unique identifiers”.

Meeting the challenges through a collaborative approach, CUSIP Global Services and FOW TRADEdata introduced in June 2009 a 9- character CUSIP identifier and 12-character ISIN identifier for each unique contract series. The service contains more than one million option CUSIPs and accompanying ISINs and related data including strike price, contract name, exchange code and underlying symbol. The CUSIP identifier links with the current OPRA ticker and new OCC symbol, providing full information within one file.

Mark Woolfenden of FOW TRADEdata comments that the collaboration with CUSIP Global Services has been successful because of the partnership approach “and the complementary expertise brought to the venture by the two organisations. FOW TRADEdata provides contract data covering all major options exchanges in the US, while CUSIP Global Services provides the management of unique identifiers which will not conflict with other CUSIPs. This combination of expertise has produced a comprehensive and efficient solution to a complex and challenging market requirement”.

Syndicated Loans

A long-standing partnership between CUSIP Global Services (CGS) and the Loan Syndications and Trading Association (LSTA) has contributed to continuing improvements in the syndicated loan and loan trading markets. The LSTA is the trade association for the corporate loan market, dedicated to advancing the interests of the marketplace as a whole and promoting the highest degree of confidence for investors in corporate loans. In October 2004, CGS and the LSTA launched a system of unique common identifiers for syndicated loan deals and facilities, following a successful pilot program originated in 2002.The application of the CUSIP identification system as an industry standard facilites transaction identification and improves handling of inquiries, market pricing and the exchange of information. The initial launch contained some 2000 CUSIP identifiers and was utilized by 21 administrative agents; continuing development of the service has brought extensive market coverage, with some 13,600 CUSIP identifiers currently active, applied for by 36 administrative agents and representing approximately 80% of the marketplace.

> "A further key development in the broad identification system for the loan market is CUSIP Global Services collaboration with Markit."

As LSTA works toward standards in the marketplace, collaboration with CGS continues to underpin developments. Ellen Hefferan, Vice President of Operations at LSTA refers to the CUSIP numbering system as "the building block for innovation in the corporate loans marketplace. The major vendors in the US loan market are committed to using CUSIP identifiers".

A further key development in the broad identification system for the loan market is CUSIP Global Services collaboration with Markit, a leading financial information services company, to bring Markit Entity Identifiers (MEIs) to the Syndicated Loan Market. MEIs uniquely identify loan market participants, namely agents, lenders and borrowers.

The new participant identification system improves transparency and liquidity in the loan market and will facilitate clearing and settlement of trades. Ellen Hefferan of the LSTA notes that "recent innovative technology initiatives, such as the ability to reconcile loan positions and receive agent bank notices electronically, rely on the use of standard unique identifiers".

A further LSTA initiative involves the use of FpML (Financial Products Markup Language) to develop an industry standard for the exchange of data, both in the United States and Europe. FpML will allow for the electronic exchange of data and information between loan market participants. Ellen Hefferan of the LSTA comments " It is important to remember that a prerequisite to this FpML initiative is that financial institutions populate fields within their accounting systems to identify loan deals and facilities by CUSIP numbers , identify market participants with MEIs and identify loan contracts with Contract Level IDs which shall be generated by the Agent Bank systems."

The Innovation Continues—What's Next?

As the drive toward improved transparency , control and risk management in the global financial markets accelerates and new regulatory requirements come online we can expect to see further initiatives, on a global basis, to extend the use of unique identifiers , involving new and complex identification criteria. OTC markets in particular will provide exacting challenges as a result of their lack of standardization.

Global standards organizations will be fully engaged in these initiatives and their efforts will be actively supported by Standard & Poor's and CUSIP Global Services. Concurrently, Standard & Poor's and CUSIP Global Services will continue to develop opportunities for industry collaboration to drive innovation and provide solutions to industry recognized issues.

Clearly, unique identifiers play a fundamental role in bringing transparency and certainty to the trading, clearance and settlement of financial instruments, but taking it a step beyond pure identification, is there a way to leverage the information around identifier issuance as an input to investment decision making? For example, during 2008/9, the rate of issuance of securities under US Government stimulus programs has proved to be a critical economic indicator. Between November 2008 and October 2009, CGS issued a total of 4735 CUSIP ID's for securities issued under the TARP, TAFT, FDIC-backed and Build America bond programs. Through tracking market behavior against stimulus related securities issuance, the effectiveness of the government's stimulus program can be more accurately assessed.

Through the aggregation of CUSIPs by instrument category, it is feasible to track the rate of issuance of new financial instruments , assessing market appetite and identifying opportunities for capital creation.

As financial markets recover from the effects of the credit crisis, we can expect to see innovation in the use of identifier-driven data for the early identification of market trends and capital creation opportunities, alongside the continued expansion of unique identifiers into alternative asset classes.

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About CUSIP Global Services

CUSIP Global Services (CGS) is dedicated to driving efficient trading, clearing and settlement in capital markets throughout the world by providing a unique common language for identifying financial instruments across institutions, exchanges and nations. With 40 years of experience in the securities identification business, CGS is the world leader in developing innovative solutions to reference data challenges.

CGS is managed on behalf of the American Bankers Association (ABA) by Standard & Poor's with a Board of Trustees comprised of representatives from leading financial institutions.

Who We Serve

CGS information helps streamline efficiencies throughout the financial system. From the assignment of identifiers for new issues to their use in trading, settlement, asset servicing and risk management, CGS provides a foundation for organizations to run their businesses smoothly and reliably.

Asset Manager – Classify financial instruments for accurate portfolio management and fund administration.

Broker-Dealers & Investment Bankers – Use a common language to optimize efficiencies and reduce failed trades.

Commercial Bankers – Maintain a universal reference for market pricing with CGS identifiers for syndicated loans.

Corporations – Issue new securities and track them throughout their life cycle.

Custodians – Streamline trade settlement and asset servicing.

Insurance Companies – Identify investments in annual statements with CGS private placement numbers (PPNs).

Regulatory & Government Agencies – Monitor cross-market and institution-specific activity.

CGS identifiers can be accessed directly from CGS or by using third-party information providers.

About CGS Identifiers

CUSIP Global Services brings coverage, consistency and expertise to the global securities marketplace offering:

- Universally recognized identification for more than 9.1 million unique financial instruments.
- Coverage of corporate, government, municipal and international securities; IPOs, preferred stock, funds, CDs and competitive/negotiated deals, derivatives, U.S. listed equity options and syndicated loans.
- Identifiers for U.S. government relief programs (FDIC TLGP, TARP, TALF and Build America Bonds).
- Standardized descriptions for up to 50 data attributes for over 6 million securities offered in the U.S. and Canada.
- 40 years of U.S. and Canadian corporate capital change information.
- Classification of Financial Instruments (CFI) codes to group instruments with similar features; for example, the CFI codes for equities include instrument groups such as shares, preferred stock, mutual funds and UITs, and instrument attributes such as voting rights and ownership.
- CGS International Numbers (CINS) for over 1 million global instruments.
- CGS ISINs for over 4 million instruments.
- CGS Business Entity Identifiers for counterparties, issuers and obligors in global financial transactions.
- RED Codes that identify credit default swap entities.

CGS identifiers support the accurate and efficient clearance and settlement of securities, as well as processing associated with income payments made during the life cycle of an issue. Among many other things, they enable:

- Holders, analysts and brokers to rapidly identify and access issue-specific data
- Custodians and sub-custodians to easily communicate on securities transactions.
- Depositories to accurately manage transaction and examine historical data.

CGS Data Services

CGS' commercial databases contain issuer and issue identifiers, standardized descriptions and related data for over 9.1 million unique financial instruments.

Coverage includes: corporate, government, municipal and international securities; IPO's, preferred stock, funds, CDs and competitive/

negotiated deals, derivatives, U.S. listed equity options and syndicated loans.

Also contains up to 50 different data elements relating to 6 million of these financial instruments, plus event-driven corporate actions such as name changes, mergers, acquisitions and reverse splits.

Data Delivery/Packages
CGS data is made available in a variety of different packages for your convenience. From data feeds to custom solutions, you can choose the offering that best meets your needs. This includes direct access via the Web and FTP links with pipe-delimited or XML data feeds and APIs with intra-day, daily and weekly updates.

Education Programs
CGS's Education Programs have been specifically designed to help users understand the structure and application of the CUSIP system and are offered free of charge in Seminar and Webinar format. One CPE credit will be offered per live course, not including Webinars.

For more information visit www.cusip.com or e-mail to cusip_info@cusip.com

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A-Team Group serves its global client base of IT and data professionals within financial institutions, technology and information suppliers, consultants and industry utilities with insight into the business of electronic trading, market data, low latency, reference data, risk management and the impact of regulation upon these industry segments.

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