Via Email – rule-comments@sec.gov

August 2, 2010

Ms. Elizabeth M. Murphy
Secretary
Securities and Exchange Commission
100 F Street NE
Washington, D.C. 20549-1090

Re: File Number S7-08-10

Dear Ms. Murphy:

Microsoft Corporation ("Microsoft") submits these comments in response to the Proposed Rule[1] published by the Securities and Exchange Commission ("Commission") on April 7, 2010 concerning "revisions to Regulation AB and other rules regarding the offering process, disclosure and reporting for asset-backed securities." Microsoft supports the overarching goal of the Proposed Rule—i.e., increasing the transparency of complex financial transactions so that potential investors are empowered to make informed and meaningful investment decisions. As noted below, Microsoft has been a leader in the development and use of technology to make financial business data more transparent to investors. Nevertheless, we do have some concerns about the portion of the Commission's proposal that would require "waterfall computer programs" to be written in a particular computer programming language and then filed with the Commission.[2] We express these concerns despite the fact that the particular language in question, Python, is one that Microsoft has worked diligently to ensure is fully supported by the Windows .NET framework. We believe that the government should avoid whenever possible the adoption of laws, rules, regulations, or policies that support particular technologies to the exclusion of others.

Background

In relevant part, the Proposed Rule is intended to address asymmetries in the availability of information necessary to model the contractual cash flow provisions of certain complex securities. The Commission proposes to remedy this problem by requiring anyone offering such investments to file the source code for a computer program capable of modeling the cascading effects[3] of the securities along with the

[1] http://www.sec.gov/rules/proposed/2010/33-9117.pdf

[2] Microsoft's comments are limited to the portion of the Proposed Rule that would require entities filing a prospectus to file a "waterfall computer program" in the Python computer programming language. These comments do not address the other proposed requirements and changes to the regulations.

[3] According to the summary provided by the Commission along with its Proposed Rule, these "waterfall computer programs" are so named because they help model the "cascading" effects of cash flows associated with certain interrelated and highly complex financial transactions. Specifically, the Commission's summary of the Proposed Rule states that it contains new requirements "to disclose standardized asset-level information or grouped asset data and a computer program that gives effect to the cash flow provisions of the transaction agreement (often referred to as the "waterfall")." See Proposed Rule, p.13.

prospectus they currently file with Commission's EDGAR filing system.[4] The Commission's Proposed Rule would specifically require that the source code for such a computer program must be written using a specific computer language called Python.

Microsoft Supports the Commission's Goal of Making Highly Complex Financial Transactions Transparent

Microsoft agrees with the importance of providing potential investors with the information they need to understand highly complex financial transactions. As a public company, Microsoft looks for ways to improve the delivery of financial information to analysts and investors. Microsoft is a founding company and ongoing supporter of XBRL (Extensible Business Reporting Language)[5], an XML-based[6] standard for business reporting. This standard provides quicker insight and increased transparency. In 2002, Microsoft became the first technology company to report its financial statements on the Internet in XBRL and has been a strong supporter of this open standard from its inception.[7] Microsoft's leadership with regard to the development and adoption of XBRL demonstrates its longstanding commitment to support and enable interactive data in financial filings, and is consistent with the Commission's goal of increasing accountability and transparency through the use of technology.

Microsoft Recommends that the Commission Adopt a Data-Oriented Approach

Microsoft, however, believes that the Commission's efforts would best serve the investing public and the marketplace if they were aimed at improving the quality of the data made available to potential investors via the EDGAR system rather than at requiring the filing of computer programming source code. Such an approach might, for example, require offerors to append sufficient meta-information to the data filed with the Commission such that prospective investors could effectively model the cascading effects of complex financial transactions using whatever financial modeling tools they prefer. By focusing on the characteristics of data that would meet its goal, the Commission could help spur innovation within the marketplace of developers for financial analysis tools.

The Administration adopted a similar approach in the Open Government Directive ("Directive") issued by the Office of Management and Budget ("OMB") on December 8, 2009.[8] The Directive was issued pursuant to an Executive Order signed by the President on January 21, 2009, and required "executive

[4] According to the Commission's web site, EDGAR, the Electronic Data Gathering, Analysis, and Retrieval system, performs automated collection, validation, indexing, acceptance, and forwarding of submissions by companies and others who are required by law to file forms with the U.S. Securities and Exchange Commission (SEC). Its primary purpose is to increase the efficiency and fairness of the securities market for the benefit of investors, corporations, and the economy by accelerating the receipt, acceptance, dissemination, and analysis of time-sensitive corporate information filed with the agency. http://www.sec.gov/edgar/aboutedgar.htm

[5] More information about XBRL can be found at http://www.xbrl.org/

[6] Extensible Markup Language (XML) is the universal format for data on the Web. XML allows developers to easily describe and deliver rich, structured data from any application in a standard, consistent way. XML does not replace HTML; rather, it is a complementary format. http://msdn.microsoft.com/en-us/library/aa286548.aspx

[7] http://www.microsoft.com/presspass/press/2002/mar02/03-05FinancialXBRLpr.mspx and http://www.microsoft.com/presspass/features/2005/feb05/02-07XBRL.mspx.

[8] http://www.whitehouse.gov/open/documents/open-government-directive.

departments and agencies to take specific actions to implement the principles of transparency, participation, and collaboration set forth in the President's Memorandum."[9] The Directive included the following requirement with regard to data published by government agencies for public download:

> To the extent practicable and subject to valid restrictions, agencies should publish information online in an open format that can be retrieved, downloaded, indexed, and searched by commonly used web search applications. An open format is one that is platform independent, machine readable, and made available to the public without restrictions that would impede the re-use of that information.[10]

Microsoft urges the Commission consider a "data-oriented" approach, such as the one described above, in place of the approach proposed in the Proposed Rule, which would require filers to include "waterfall computer programs" along with their EDGAR filings. In adopting this approach, the Commission would help ensure that its Proposed Rule promotes flexibility and technology choice, and, thereby encourages greater innovation in the development of tools to analyze the data. Moreover, given the rapid pace of development in both computing technology and in computer languages themselves, there is a significant risk that any computer programming language singled out by the Commission for the purpose of this Proposed Rule—no matter how carefully selected—may soon be obsolete.[11]

In addition to concerns about the potential for obsolescence, Microsoft believes that there may be negative security implications associated with hosting source code for download on the EDGAR system—even assuming that the source code would be in a human readable format and that code would be executed locally on the investor's own computer. If, however, the Commission determines that it is necessary to require the filing of "waterfall computer programs" in the EDGAR system, Microsoft believes the Proposed Rule should not prefer any particular technology, software development framework, business model, or programming language—even one such as Python that Microsoft has supported through significant investments of time and money.

The Commission Should Carefully Consider the Security Implications for Investors of Hosting Source Code for Public Download

As the Commission notes in its explanation of the Proposed Rule, the Commission's own regulations prohibit filing executable code in EDGAR.[12] The Commission asserts that the Proposed Rule's requirement regarding filing "waterfall computer programs" in EDGAR would not run afoul of this prohibition. It offers the following explanation:

> Executable code results from separately compiling a computer program prior to running it. Since Python is an interpreted language that does not need to be

[9] Id.

[10] Id.

[11] http://www.infoworld.com/t/languages-and-standards/whatever-happened-perl-012

[12] The Commission's summary makes reference to Securities Act Rule 106 to Regulation S-T, which it states can be found at 17 CFR 239.106. See Proposed Rule p.214, FN 352. However, it appears that the regulation can actually be found at 17 CFR 232.106. http://edocket.access.gpo.gov/cfr_2007/aprqtr/pdf/17cfr232.106.pdf

> compiled prior to running it, executable code would not need to be published on EDGAR, and we would not require EDGAR to establish facilities to host, run, or operate any computer program.[13]

The Commission asserts that the "waterfall computer programs" will not contain any executable code because the source code is visible to the end user in a human readable format. In addition, the Commission draws a distinction between code that would be executed from within EDGAR and code that would be executed locally—i.e., via an interpreter installed on the investor's own computer.

> We prohibit the inclusion of executable code in electronic submissions on EDGAR because of the computer security risks posed by accepting executable code for filing. Executable code results from separately compiling a computer program prior to running it. Since Python is an interpreted language that does not need to be compiled prior to running it, executable code would not need to be published on EDGAR, and we would not require EDGAR to establish facilities to host, run, or operate any computer program.[14]

To the extent the Commission's rule is intended to protect its own computers from being infected by malicious code, the distinction drawn in the summary for the Proposed Rule is potentially meaningful. However, any computer programming language that the Commission might select will require potential investors to use an interpreter or a compiler. In either event, source code downloaded from EDGAR will be executed by potential investors on computers that they own, operate, or control. Therefore, Microsoft urges the Commission to also consider the security implications for hosting computer source code that will be executed on the investors' computers—even if such code is in a human readable format and will not be directly executed from the EDGAR system's servers.

Microsoft Recommends that the Commission not Require the Use of a Particular Programming Language

Should the Commission conclude that filing the "waterfall computer program" is, in fact, the only feasible way to address its goal of increasing the transparency of complex financial transactions, Microsoft urges the Commission to amend the Proposed Rule and to eliminate the exclusive reliance upon the Python computer language. In expressing this concern, it should be noted that Microsoft's focus is not related specifically to the Python computer language itself. Microsoft has helped developed a specific, implementation of Python, called IronPython that runs within the Windows .NET framework and is available to the public via an open source license.[15]

Rather, even when the technology selected by the government is one that is supported by Microsoft's Windows platform, Microsoft believes in preserving technology choice. In allowing for choice, the Commission can attract the widest array of market competitors to address the problem it has identified—i.e., the need to develop more powerful tools to allow for the modeling of cascading

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[13] See Proposed Rule, p.214.

[14] Id.

[15] According to the IronPython website, "IronPython is an implementation of the Python programming language running under .NET and Silverlight. It supports an interactive console with fully dynamic compilation. It's well integrated with the rest of the .NET Framework and makes all .NET libraries easily available to Python programmers, while maintaining compatibility with the Python language. There also is Visual Studio tooling integration." http://ironpython.codeplex.com/

financial transaction. As a result, we would encourage the Commission to explore ways to leverage technology to improve transparency for proposed investors while adhering to principle of technology choice. Accordingly, Microsoft would not recommend that the Commission require that "waterfall computer programs" be exclusively written in the Python computer programming language—even assuming that the "data oriented approach" we recommend is deemed impracticable.

To that end, if the approach in the Proposed Rule is adopted—i.e., an approach focused on making source code available to investors that can be used to interpret data rather than one focused on the data itself—Microsoft believes the Commission should foster an inclusive, multi-vendor environment with more options and choice for programming and runtime environments. For example, the Commission could allow offerors to select from a basket of modern programming languages that might include, but not necessarily be limited to, any of the following: Python, ECMAScript, Java, Ruby, C#, and VBA/Excel for use in filings covered by the Proposed Rule. The Commission's goal in this regard should be to enable choice among a broad array of computer programming languages that are widely used and supported and offer rich functionalities.

Respectfully submitted,

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