504731049 01/16/2018

PATENT ASSIGNMENT COVER SHEET

NEW ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:

EPAS ID: PAT4777774

NATURE OF CONVEYANCE:		ASSIGNMENT					
						CONVEYING PARTY D	ATA
		Name	Name				
MORGAN STANLEY &	CO. LLC			03/01/2016			
RECEIVING PARTY DA	ATA						
Name:	MORGAN	GAN STANLEY SERVICES GROUP INC.					
Street Address:	1585 BRO	5 BROADWAY					
City:	NEW YOR	YORK					
State/Country:	NEW YOR	K					
Postal Code:	10036						
PROPERTY NUMBERS	5 Total: 9						
Property Type		Number					
Patent Number:	869	4413					
Application Number:	141	84423					
Application Number:	141	86223					
Patent Number:	882	5539					
Application Number:	144	54381					
Patent Number:	856	6146					
Application Number:	134	05033					
Application Number:	139	74874					
Application Number:	134	46075					
CORRESPONDENCE [ΑΤΑ						
Fax Number:	(412	2)355-6501					
-		e-mail address first; if tha		-			
<i>using a fax number, if</i> Phone:	•	that is unsuccessful, it will	l be sent via US M	lail.			
Email:		412-355-6342 niuspatents@kloates.com					
Correspondent Name:	•	piuspatents@klgates.com K&L GATES LLP - MARK G. KNEDEISEN					
Address Line 1:		210 SIXTH AVENUE					
Address Line 1:		. GATES CENTER					
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NAME OF SUBMITTER:		MARK G. KNEDEISEN					
GIGNATURE:		/Mark G. Knedeisen/					

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PATENT REEL: 044627 FRAME: 0828

DATE SIGNED:	01/16/2018				
Total Attachments: 4					
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ASSIGNMENT OF PATENTS

THIS ASSIGNMENT OF PATENTS (this "Assignment") is made as of March 1, 2016 between Morgan Stanley & Co. LLC ("Assignor") and Morgan Stanley Services Group Inc. ("Assignee"). Each of Assignor and Assignee may be referred to herein as a "Party" and collectively, as the "Parties".

WITNESSETH:

WHEREAS, Assignor desires to assign to Assignee all right title and interest in, to and under the patents and patent applications set forth on Schedule A and the inventions claimed therein (collectively, the "**Patents**") and Assignee desires to acquire all such right, title and interest in, to and under the Patents.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor and Assignee intending to be legally bound, hereby agree as follows:

1. Assignor hereby sells, assigns, transfers, conveys and delivers unto Assignee all of Assignor's right, title and interest in, to and under the Patents, to be held and enjoyed by Assignee to the full end of the term for which said Patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor had this assignment and sale not been made.

2. Assignor hereby agrees to sign all necessary papers and do all lawful acts reasonably requisite in connection with the prosecution, assignment, enforcement and disclaimer of each and every Patent and each and every patent application based upon the Patents, without further compensation, but at the expense of Assignee or its successors and assigns, and Assignor hereby assigns to Assignee all rights to sue for infringement, including past infringement if any, of any Patent or patent based upon or corresponding to the Patents. Assignor hereby authorizes and requests the officials of all countries in which the Patents are now or in the future will be issued to issue to Assignee all of Assignor's right, title and interest in and to the same for the sole use and enjoyment of Assignee, its successors and assigns.

 This Assignment shall be governed by and construed in accordance with the law of the State of New York, without regard to the conflicts of law rules of such state.

 This Assignment may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Assignment to be duly executed as of the day and year first above written.

MORGAN STANLEY & CQ. LLC By: Sèrgio Luph Namd Managing Director Title:

MORGAN STANLEY SERVICES GROUP INC.

......

By:

Name: Title:

> PATENT REEL: 044627 FRAME: 0831

IN WITNESS WHEREOF, the Parties have caused this Assignment to be duly executed as of the day and year first above written.

MORGAN STANLEY SMITH BARNEY HOLDINGS LLC

By:

Name: Title:

MORGAN STANLEY SERVICES GROUP INC.

Call ! By:

Name: STEVEN LIFRUCH Title: MAGIN BRECTER

<u>Schedule A</u>

<u>Patents</u>

-				
Title	Filing Date	Application Number	Patent Number	Issue Date
Computer-Based Systems and Methods for Determining Interest Levels of Consumers in Research Work Product Produced by a Research Department	2/23/2012	13/402,998	8,694,413	4/8/2014
Computer-Based Systems and Methods for Computing Market-Adjusted Elasticities for Accounts	8/1/2012	13/564,077	8,825,539	9/2/2014
Computer-Based Systems and Method for Computing a Score for Contacts of a Financial Services Firm Indicative of Resources to be Deployed by the Financial Services Firm for the Contacts to Maximize Revenue for the Financial Services Firm	5/10/2012	13/468,348	8,566,146	10/22/201
Computer-Based Systems and Methods for Computing Market-Adjusted Elasticities for Accounts	8/7/2014	14/454,381		
Computer-Based Systems and Methods for Determining Required Disclosures	2/24/2012	13/405,033		
Computer-Based Systems and Methods for Determining Interest Levels of Consumers in Investment Asset Classes Covered by a Research Department that Produced Research about the Investment Asset Classes	4/13/2012	13/446,075		
Passive Real-Time Order State Replication and Recovery	8/23/2013	13/974,874		