PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Menner Tatang	11/17/2009
J. Douglas Gordon	11/17/2009
Ming Xiong	11/17/2009
Shaojie Chen	11/17/2009

RECEIVING PARTY DATA

Name:	Federal Home Loan Mortgage Corporation (Freddie Mac)
Street Address:	8200 Jones Branch Drive
City:	McLean
State/Country:	VIRGINIA
Postal Code:	22102

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12621065

CORRESPONDENCE DATA

Fax Number: (202)408-4400

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 202.216.5492

Email:gonnella@finnegan.comCorrespondent Name:Amy-Marie GonnellaAddress Line 1:901 New York Ave., NW

Address Line 4: Washington, DISTRICT OF COLUMBIA 20001

ATTORNEY DOCKET NUMBER: 05997.0058

NAME OF SUBMITTER: Amy-Marie Gonnella

Total Attachments: 3

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PATENT REEL: 023537 FRAME: 0222

ASSIGNMENT

WHEREAS We, the below named inventors (hereinafter referred to as Assignors) have made an invention entitled:

SYSTEMS, METHODS, AND COMPUTER-READABLE STORAGE MEDIA FOR CALCULATING A HOUSING VOLATILITY INDEX

for which We executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, Federal Home Loan Mortgage Corporation (Freddie Mac), a shareholder-owned government-sponsored enterprise, whose post office address is 8200 Jones Branch Drive, McLean, Virginia 22102 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, We as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our entire right, title, and interest in and to this invention, and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application, as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and We hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, We HEREBY covenant that We have the full right to convey the interest assigned by this Assignment, and We have not executed and will not execute any agreement in conflict with this Assignment;

AND, We HEREBY further covenant and agree that We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, We have hereunto set our hands.

County of Firfa	<u> </u>	Name:	Menner Tatang
) ss.	Address:	796 Thomas Run Dr.
	.) =		Great Falls, VA 22066
State of Virgin	14)	By:	A Comment of the Comm
7		Date:	11/17/2003
Subscribed and sworn	ito before me this 17th da	ay of <u>Λων.</u>	_, 20 <u>() 9</u>

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PATENT REEL: 023537 FRAME: 0223

LINDA PITTS

JOINT INVENTION (Worldwide Rights) Attorney Docket No. 05997.0058-00

County of Fair fair)	Name:	J. Douglas Gordon
) ss.	Address:	3206 N. George Mason Drive
State of Virginia)	By: Date:	Arlington, VA 22207 Aug Javan 11/07/09
Subscribed and sworn to before hundal Purs.	me this <u></u> day Notary Public	of YOU.	LINDA PITTS Notary Public Commonwealth of Virginia Reg. #180186 My Commission Exps. Nov. 30, 2011
County of Fairfall)	Name:	Ming Xiong
) ss.	Address:	20403 Trails End Terrace
State of Virginia)	By: Date:	Ashburn, VA 20147 May 7. 11/17/09
Subscribed and sworn to before	me this <u></u> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	of <u>\(\O\)</u>	LINDA PITTS Notary Public Commonwealth of Virginia Reg. #180186 My Commission Exps. Nov. 30, 2011

PATENT

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County of)	Name:	J. Douglas Gordon
) ss.	Address:	3206 N. George Mason Drive
)		Arlington, VA 22207
State of)	Ву:	
		Date:	
Subscribed and sworn to before me, Not	this day ary Public	/ of	, 20
County of)	Name:	Ming Xiong
) ss.		20403 Trails End Terrace
)		Ashbum, VA 20147
State of)	Ву:	
		Date:	
Subscribed and sworn to before me, Not	this day ary Public	of	_, 20
County of Fairfay)		Shaojie Chen
,) ss.	Address:	7352 Dartford Drive, Apt. 3
State of Virginia)	By: Date:	McLean, VA 22102
Subscribed and sworn to before me	this <u>\7</u> th day ary Public	of <u>√</u> 0.	

RECORDED: 11/18/2009

LINDA PITTS
Notary Public
Commonwealth of Virginia
Reg. #180186
My Commission Exps. Nov. 30, 2011