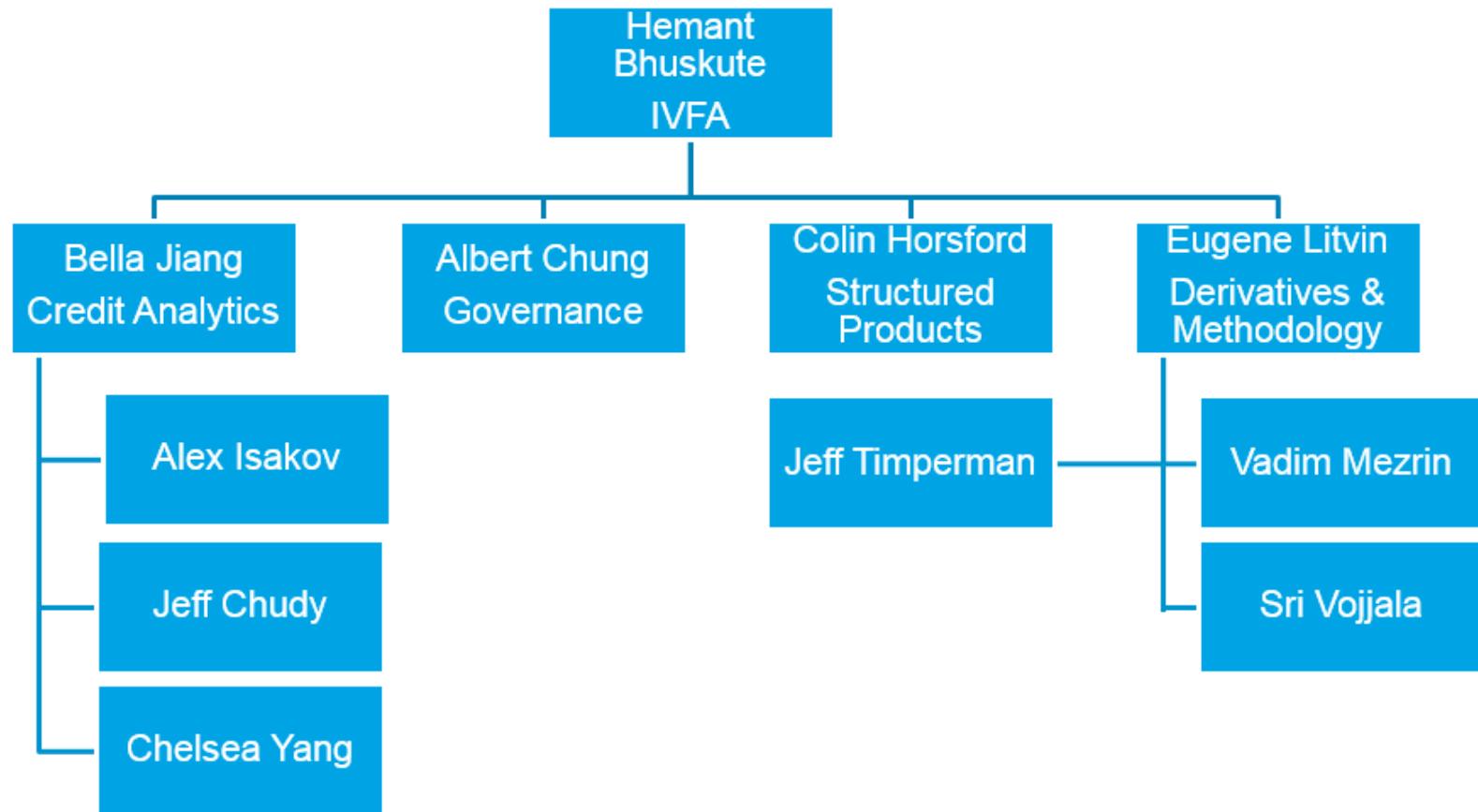


Agenda

- **Introduction of the IVFA team**
- **Procedures – Price Verification / Valuation**
 - SOX Control
 - Process Flows
 - Walkthrough Samples for each Control
- **Key Inventories**

Introduction of the IVFA Team



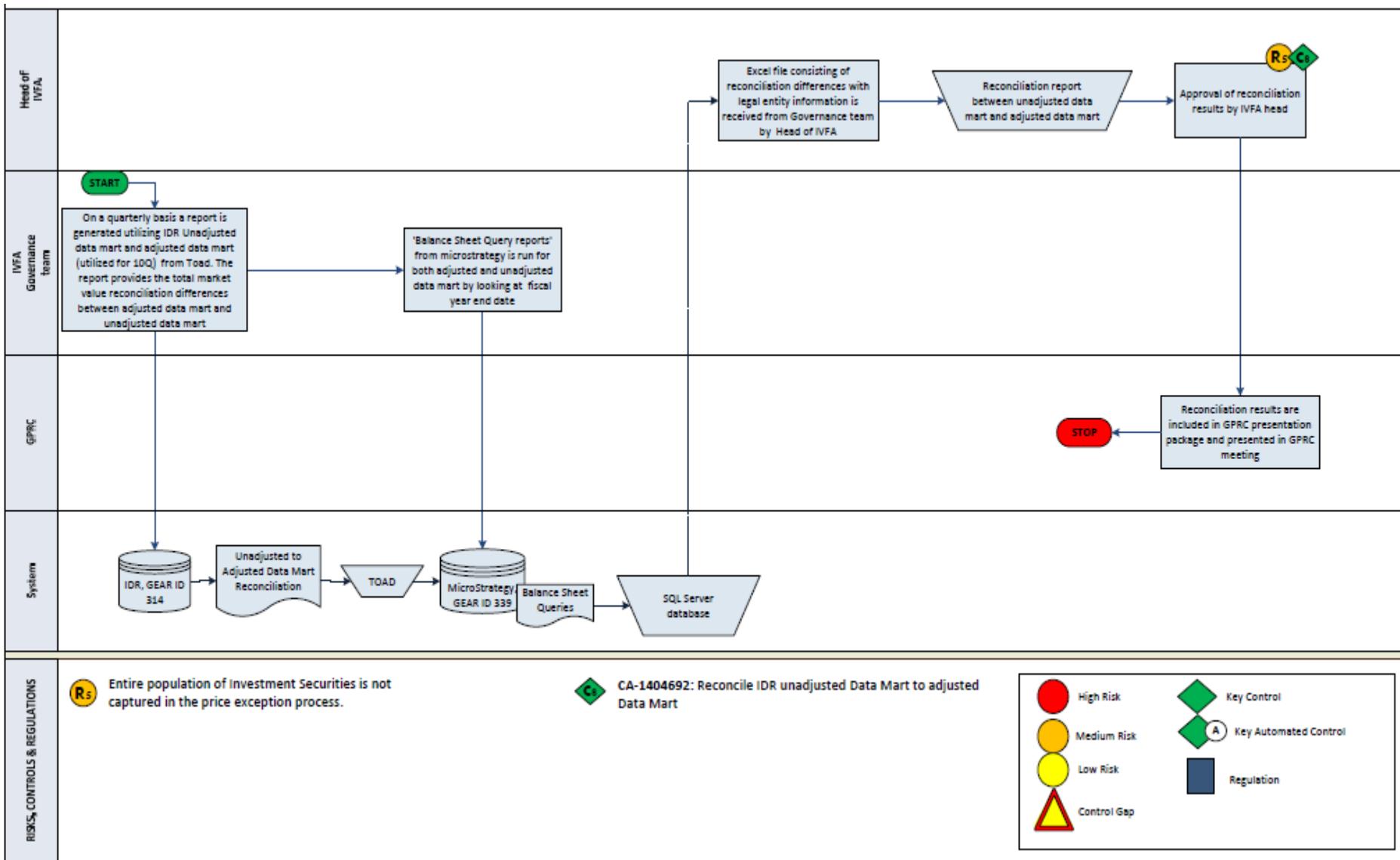
Reconciliation of Balance sheet reconciliation

Control CA-1404692 (Risk – Medium, Frequency – Quarterly)	
Description	Additional Description
Quarterly, an Independent Valuation and Financial Analytics (IVFA) analyst reconciles the total market value of investments securities between the IDR month end close Data Mart used in IVFA reports and the total market value reported in the 10Q/10K (IDR GAAP Baseline Data Mart) using stored procedures. The reconciliation results are reviewed and approved by the head of IVFA via email and included in the Global Pricing Review Committee (GPRC) presentation package.	

On May 8 2019, Albert Chung has verified that this control description is accurate for 2019.



Balance sheet reconciliation Process Flowchart



CA-1404692: Balance Sheet Reconciliation - Walkthrough Example

From: Bhuskute, Hemant
To: Chung, Albert
Cc:
Subject: RE: Reconciliation to the Balance Sheet

Sent: Thu 4/25/2019 11:35 AM

Reviewed and Approved.

Regards,

Hemant Bhuskute

From: Chung, Albert
To: Bhuskute, Hemant
Cc:
Subject: Reconciliation to the Balance Sheet

Sent: Thu 4/25/2019 11:31 AM

[Message](#) [PV Coverage Excel Grid Q1 2019.xlsx](#)

[reconciliation_report_033119_040319_033119_041819.xlsx](#) [reconciliation_report_022819_030519_033119_041819.xlsx](#)

Hemant,

I will walk you through this in your office. Please review and approve the attached reconciliation to the Q1'19 balance sheet. These were done using the new stored procs.

As a Q2'19 item, we will need to make additional code changes to utilize Investment Accounting's new balance sheet filters – for now, I had to identify the differences in population using old/current vs. new filters (minimal diff of only \$10MM). This separate rec is saved here (too big to attach):

- IVFA\GPC_RPC_Documents\RPC Reports_Exception Reports\BalanceSheetRec\2019\Q1\Microstrategy\

Thanks.

Item 1. | Financial Statements

American International Group, Inc. Condensed Consolidated Balance Sheets (*unaudited*)

	March 31, 2019	December 31, 2018
<i>(in millions, except for share data)</i>		
Assets:		
Investments:		
Fixed maturity securities:		
Bonds available for sale, at fair value (amortized cost: 2019 - \$228,608; 2018 - \$225,780)	\$ 238,201	\$ 229,391
Other bond securities, at fair value (See Note 6)	11,511	11,415
Equity Securities, at fair value (See Note 6)	841	1,253
Mortgage and other loans receivable, net of allowance	43,834	43,135
Other invested assets (portion measured at fair value: 2019 - \$5,759; 2018 - \$5,894)	19,343	19,341
Short-term investments, including restricted cash of \$251 in 2019 and \$142 in 2018 (portion measured at fair value: 2019 - \$4,040; 2018 - \$3,015)	11,153	9,674
Total Investments	324,863	314,209

CA-1404692: Balance Sheet Reconciliation - Walkthrough Example

Reconciliation Report												
PARAMETERS		First	Second									
Data Mart IDs		97582	98083									
As Of Date		31-Mar-2019	31-Mar-2019									
As At Date		03-Apr-2019	18-Apr-2019									
Original or Adjusted		Adjusted	Adjusted									
FILTERS		Y										
Balance Sheet Indicator		PAM	Jawah	IA Non-PAM Assets								
Accounting System		Hybrid Trading	Trading	Available For Sale								
Portfolio Type		BONDS	COMMON STOCK	MUTUAL FUND /ON REDEEMABLE								
Unadjusted Month End 03/31												
1. Securities Added	228,494,185,827	0	22,523,968,437	0	251,018,154,264	22,983	DM used for running IVFA exception reports					
2. Securities Removed	165,991,156	0	498,895,771	0	664,886,927	250						
3. Securities Market Value Adjustments	800,000,000	0	377,391,112	0	1,177,391,112	127						
Difference	(2,810,661)	0	21,374,450	0	18,563,789	0						
Calculated Market Value	(636,819,505)	0	142,279,109	0	(494,540,396)	0						
Adjusted Quarter End 03/31	227,857,366,322	0	22,666,247,546	0	250,523,613,868	22,987						
Adjusted Quarter End 03/31	227,857,366,322	0	22,666,247,546	0	250,523,613,868	22,987	DM that's supposed to tie to GAAP baseline / Q1'19 Balance sheet					
Note												
Fiji	Adjusted market values for Fiji are on a three month lag											
Chartis	Adjusted market values for Chartis are on a one month lag											
Extra securities using new Investment Accounting filters												
Extra securities using Old / Current filters												
MV vs. Carry Value												
Q1'19 Balance Sheet Bonds & Equities Total												
Difference												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
Summary												
Securities Added Dom		Securities MV Adjustments Dom		Securities Added Fuji		Securities Added Chartis		Securities Added Other				
Securities Removed Dom		Securities Removed Fuji										

CA-1404692: Balance Sheet Reconciliation - Walkthrough Example

reconciliation_report_033119_040319_033119_041819 - Microsoft Excel

	A	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	135													165,991,156.37	0.00	165,991,156	
2	Sec ID (Primary)	AIG Asset Class	AIG Asset	FAS 157	GAAP Asset	Asset Class	Quantity	Unadjusted	Quantity	Difference	Price Local GAAP	Price Local GAAP	Market Value USD GAAP	Value USD GAAP	Market Value USD GAAP	Comments	
109	LX171260	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,179,918.25		1,179,918		
110	LX171261	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							66,549.25		66,549		
111	LX173215	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							843,076.79		843,077		
112	LX173537	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,456,245.00		1,456,245		
113	LX173579	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							672,825.00		672,825		
114	LX174227	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							980,031.41		980,031		
115	LX175222	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,475,940.00		1,475,940		
116	LX176623	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							2,323,598.48		2,323,598		
117	LX178151	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,333,666.66		1,333,667		
118	LX178165	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							433,445.03		433,445		
119	LX178223	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,101,186.65		1,101,187		
120	LX178379	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							68,396.70		68,397		
121	LX178382	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							985,000.00		985,000		
122	LX178418	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							233,034.96		233,035		
123	LX178454	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							332,776.66		332,777		
124	LX178457	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,652,406.27		1,652,406		
125	LX178572	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							331,250.00		331,250		
126	LX178624	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							332,500.00		332,500		
127	LX178780	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							150,218.73		150,219		
128	LX179026	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							971,250.00		971,250		
129	LX179027	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							485,000.00		485,000		
130	LX179029	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,497,195.00		1,497,195		
131	LX179089	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							997,080.00		997,080		
132	LX179100	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							988,130.00		988,130		
133	LX179138	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							500,625.00		500,625		
134	LX179176	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							821,875.00		821,875		
135	LX179257	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							998,750.00		998,750		
136	LX179312	CREDIT LOAN	CREDIT LOAN	L2	FIXED MATURITY	BONDS							1,000,000.00		1,000,000		
137	UST20260331225	CREDIT SECURITY	NATIONAL GOVT	1	FIXED MATURITY	BONDS	69,000,000		69,000,000	99,62500			99,62500	68,827,500.00		68,827,500	Would have been a single source exception. BMG is the GC. IDC and MarkIT do not price - sent to Chelsea to see if she can price independently.
138							396,203		396,203	100,73890			100,73890	402,636.00		402,636	
139																	

Summary Securities Added Dom Securities MV Adjustments Dom Securities Added Fuji Securities Added Chartis Securities Added Other Securities Removed Dom Securities Removed Fuji

CA-1404692: Balance Sheet Reconciliation - Walkthrough Example

PV Coverage Excel Grid Q1 2019 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat

B2 ffx IVFA Price Verification Coverage / Comparison to Balance Sheet

A B C D E F G H

IVFA Price Verification Coverage / Comparison to Balance Sheet

AIG Consolidated Balance Sheet Q1 2019

Amount in \$ MM

Assets	Description	Amount	In Scope	Status	Notes
Bonds available for sale, at fair value	238,201	238,201		Bonds and equities total \$250,553MM.	Validated through Core
Other bond securities, at fair value	11,511	11,511		Reconciliation of IVFA 3/31 reports to	Price Verification Process;
Equity securities, at fair value	841	841		the balance sheet complete.	IDR Inventory
Short-term investments (portion measured at fair value: \$4,040)	11,133	11,133		100% covered in the PV process	
Other invested assets* (portion measured at fair value: \$5,759)	19,343	5,759		Validated through alternative procedures	Includes 100% of Investments in Hedge Funds and Private Equity
Derivative assets, at fair value	892	892		100% covered in the PV process	JAVAH
Total	281,921	268,337			

Liabilities	Description	Amount	In Scope	Status	Notes
Policyholder contract deposits (portion measured at fair value: \$4,878)	145,380	4,878		Review process in place	Embedded Derivatives
Derivative liabilities, at fair value	1,231	1,231		100% covered in the PV process	JAVAH / CDS
Long-term debt (portion measured at fair value: \$2,263)	35,776	2,263		100% covered in the PV process	JAVAH / GICs / Debt
Total	182,387	8,372			
Absolute Total	464,308	276,709			

* Includes securities valued using equity method

Summary

Reconciliation of Price Validation reports

Control CA-1404693 (Risk – Medium, Frequency – Twice per Quarter)

Description	Additional Description
Twice per quarter, the Independent Valuation and Financial Analytics (IVFA) Governance team generates a consolidated price exception report (i.e., Price Compare/Variance, Stale, Internally Priced, Single Source and Price Change) from the IDR month end close Data Mart. The exception report is segregated by product and distributed by the Governance team to the respective product analysts to validate the valuations. Once the validations are completed, the validation results files are sent back to the Governance team and the total exception population market value and total exception count by product are reconciled to the original exception reports. Reconciliation results are reviewed and approved by Head of IVFA.	

Control CA-1404694 (Risk – Medium, Frequency – Semi Annual)

Description	Additional Description
Semi-Annually, the Independent Valuation and Financial Analytics (IVFA) supervisor independently reviews all changes to the underlying logic utilized to generate price exception reports and verifies that they were previously authorized by the Senior Governing Body ("SGB") of the Global Pricing Review Committee (GPRC). Approval is evidenced via email.	

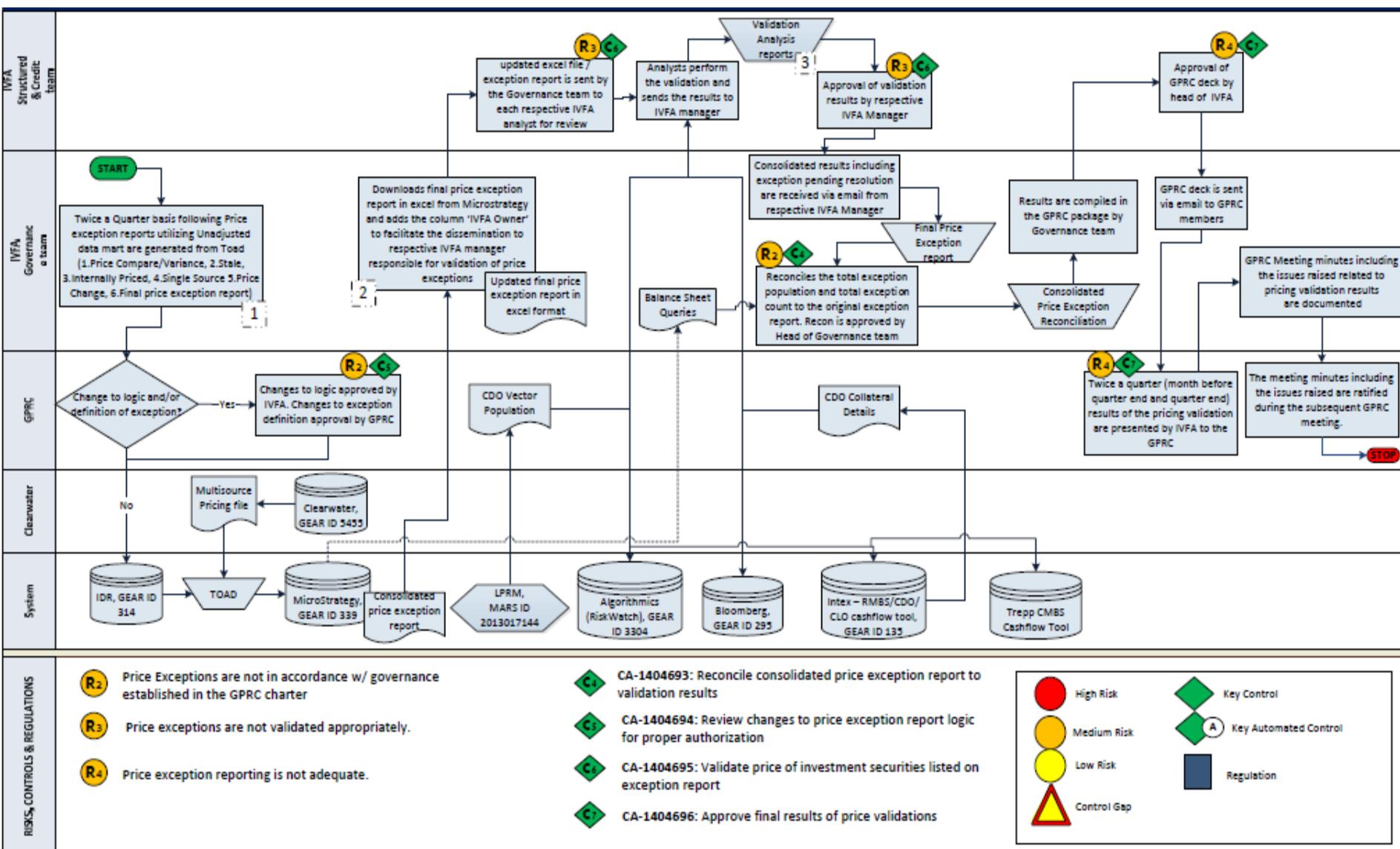
Control CA-1404696 (Risk – Medium, Frequency –Quarterly)

Description	Additional Description
Quarterly, the Head of Independent Valuation and Financial Analytics (IVFA) approves the final results of price validations, which is evidenced via email. Any issues raised in the GPRC meetings related to pricing validation results are reflected in GPRC meeting minutes, which are ratified during the subsequent committee meeting.	

On May 08 2019, Albert Chung has verified that this control description is accurate for 2019.



Price Exception Validation Process Flowchart



CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

From: Chung, Albert
To: IVFA Group
Cc:
Subject: March Month End Exception Report

Sent: Thu 4/4/2019 3:37 PM

Message  final_exception_report_022819_040119_033119_040319.xlsx (202 KB)  Consolidated Vendor and Trade File 3.31.19.xlsx (318 KB)

Attached are the following files:

- March month end exception report
- Consolidated list of vendor marks and trades
 - Trace is no longer supported via the BMBG Excel add-in feature – I will chat with BMBG Help Desk to see how I can get this back, but assume no trade for this month end

PPV broker upload files will be sent separately once available. Please send results back to me by **3PM Wednesday 4/24/19**. A reminder has been embedded within this email. When sending back results, please be sure to include all **4 requests** below for each position. Thanks.

Request 1 – Method of Resolution

Please insert a column and tag each exception assigned to you with one of the following comments:

Comment	Examples of what the comment means
• Validated by alternate pricing source	- (for example: broker quotes, vendor marks, trades)
• Validated by IVFA modeled price	- (for example: RiskWatch, Intex, Trepp)
• Alternate Validation	- (does not fit any of the 2 criteria above)
• Pending Resolution	- (unresolved exception at the time of cut-off)

Request 2 – Alt Source Identification

If and only if the tagging is "validated by alternate pricing source" please also add another column and name that validating source (e.g. Morgan Stanley).

Request 3 – Bill Hespe's Request

For EACH unresolved exception (pending resolution), include Desk feedback (e.g. "Desk feels comfortable with the GC price") in the commentary and IVFA's response to the Desk feedback.

- One exception to this request are Private Placement new issuances - you do not need to input desk feedback

Request 4 *NEW* – IVFA Validation Price

Please make sure that each exception has an IVFA validation price, regardless if resolved or unresolved. There is a new stat that shows upside/downside with IVFA's pricing layered in.

CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

final_exception_report_022819_040119_031119_040319 [Read-Only] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat

Y18 Credit Analytics

A	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1																					
2																					
3																					
4	PARAM																				
5	Data Mart																				
6	As Of Date																				
7	As At Date																				
8	Original or																				
9																					
10	FILTERS																				
11	Balance Sh																				
12	Accounting																				
13	Portfolio 1																				
14	GAAP Ass																				
15																					
16																					
	Sec ID (Primarg)	Maturity Date	Price Variance	State Priority	Internally Priced Priority	Single Price Priority	Price Change Priority	AIG Asset Class 3	AIG Asset Class 4	Security CCY	Price Local GAAP (source)	FAS157 Price Source	Prior Price LCL GAAP (Source)	LEHIDX Price	IDC Price	BMBG Price	MARKIT Price	Quantity	Market Value USD GAAP	Exception Rating	IVFAOwner
17																					
18	001201A*3	08-Sep-2022	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	USD	99.08	PPPBROKER	99.08					50,000,000	49,540,000	Price Warning Criteria	Credit Analytics
19	00151*AA5	20-Dec-2022	-1	1	5	1	5	Corporate Bond	Corporate Bond Senior	USD	100.00	TRADEPX	100.00					400,000,000	400,000,000	Price Exception Criteria	Credit Analytics
20	00151*AB3	20-Dec-2023	-1	1	5	1	5	Corporate Bond	Corporate Bond Senior	USD	100.00	TRADEPX	100.00					400,000,000	400,000,000	Price Exception Criteria	Credit Analytics
21	00163*GA86	15-Oct-2028	-1	5	5	2	5	CDO	CLO CF	USD	99.33	MARKIT	99.32				99.33	30,125,000	29,923,476	Price Warning Criteria	Structured Products
22	00216*AA5	15-Jun-2051	-1	5	5	1	5	CMBS Non-Agent	CMBS Conduit	USD	100.00	TRADEPX	100.00					186,510,789	186,510,789	Price Exception Criteria	Structured Products
23	006278*AS4	15-Jul-2026	-1	5	5	1	5	CDO	CLO CF	USD	100.01	MARKIT	99.76				100.01	52,032,314	52,037,216	Price Exception Criteria	Structured Products
24	007036*SC1	25-Nov-2035	2	5	5	5	5	RMBS Non-Agent	RMBS Alt-A	USD	91.94	IDC	91.69	91.94	97.95	97.79	26,787,518	24,628,626	Price Warning Criteria	Structured Products	
25	00703*AA5	25-Jun-2037	2	5	5	5	5	RMBS Non-Agent	RMBS Alt-A	USD	87.66	IDC	87.55	87.66	99.47	94.31	17,071,273	14,964,365	Price Warning Criteria	Structured Products	
26	00910*AA0	30-Nov-2024	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	USD	101.87	BMBG	101.03					27,613,346	28,131,55	Price Warning Criteria	Credit Analytics
27	01439*AG2	04-Apr-2022	-1	5	5	1	5	Corporate Bond	Corporate Bond Senior	USD	103.59	PPPBROKER	103.59					50,000,000	51,795,000	Price Exception Criteria	Credit Analytics
28	02554*CAH2	15-Dec-2044	-1	5	5	2	5	Regional Govt	Muni Taxable	USD	115.98	RJAMES	108.99					24,675,000	28,618,065	Price Warning Criteria	Credit Analytics
29	02660*FM0	25-Sep-2035	2	5	5	5	5	RMBS Non-Agent	RMBS Alt-A	USD	83.48	IDC	82.86	83.48		90.87	37,446,739	31,260,070	Price Warning Criteria	Structured Products	
30	031100*#B2	31-Oct-2028	-1	5	5	1	5	Corporate Bond	Corporate Bond Senior	EUR	101.50	PPPBROKER	96.38					45,000,000	51,229,080	Price Exception Criteria	Credit Analytics
31	031100*#D2	31-Oct-2026	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	EUR	97.50	PPPBROKER	97.50					33,000,000	36,087,480	Price Warning Criteria	Credit Analytics
32	03330*AA2	28-Oct-2033	-1	5	5	2	5	CDO	CLO CF	USD	98.48	MARKIT	98.45				98.48	27,500,000	27,080,972	Price Warning Criteria	Structured Products
33	03764*QB6	20-Apr-2031	-1	5	5	2	5	CDO	CLO CF	USD	98.77	MARKIT	98.93				98.77	30,000,000	29,631,645	Price Warning Criteria	Structured Products
34	040104*SN6	25-Apr-2036	2	5	5	5	5	RMBS Non-Agent	RMBS Subprime	USD	63.09	IDC	62.73	63.09	66.78	69.76	84,334,728	53,585,379	Price Warning Criteria	Structured Products	
35	04262*EAC4	17-Jun-2024	-1	5	5	2	5	Credit Loan	Bank Loan	USD	96.50	BMBG	97.13					29,625,000	28,588,125	Price Warning Criteria	Credit Analytics
36	04317*AG3	27-Feb-2026	-1	5	5	1	5	Corporate Bond	Corporate Bond Senior	USD	103.03	PPPBROKER	100.71					95,000,000	97,878,500	Price Exception Criteria	Credit Analytics
37	04317*AH1	27-Feb-2023	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	USD	104.53	PPPBROKER	101.34					30,000,000	31,359,000	Price Warning Criteria	Credit Analytics
38	04317*AZ1	27-Jun-2032	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	USD	98.61	PPPBROKER	94.37					37,500,000	36,978,750	Price Warning Criteria	Credit Analytics
39	04317*BA5	02-Aug-2032	-1	5	5	2	5	Corporate Bond	Corporate Bond Senior	USD	98.60	PPPBROKER	94.25					37,500,000	36,975,000	Price Warning Criteria	Credit Analytics
40	04318*AC1	16-Aug-2022	-1	5	5	1	5	Corporate Bond	Corporate Bond Senior	USD	104.15	PPPBROKER	103.25					90,000,000	93,735,000	Price Exception Criteria	Credit Analytics
41	04575*AD6	01-Aug-2022	-1	5	5	2	5	Credit Loan	Bank Loan	USD	95.25	BMBG	94.75			95.25		29,250,000	27,860,625	Price Warning Criteria	Credit Analytics
42	04682*AA2	15-Sep-2049	-1	5	5	1	5	CMBS Non-Agent	CMBS Conduit	USD	99.15	MARKIT	99.06				99.15	212,580,749	210,780,190	Price Exception Criteria	Structured Products
43	04941*VAC9	20-Apr-2028	-1	5	5	2	5	CDO	CLO CF	USD	99.08	MARKIT	98.74				99.08	33,740,000	33,428,381	Price Warning Criteria	Structured Products
44	05530*WP2	25-Aug-2047	2	5	5	5	5	RMBS Non-Agent	RMBS Option Arm	USD	74.47	IDC	74.28	74.47	65.65	70.14	47,487,729	35,362,468	Price Warning Criteria	Structured Products	
45	07082*#B0	03-Mar-2023	-1	5	5	1	5	Corporate Bond	Corporate Bond Secure	USD	97.98	PPPBROKER	94.00					75,000,000	73,395,000	Price Exception Criteria	Credit Analytics

CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

From: Mezrin, Vadim
 To: Chung, Albert
 Cc:
 Subject: Mar 2019 Exceptions

Sent: Fri 4/26/2019 11:55 AM

Message **Graphs Structured 2019.03.v1.5.2.xlsxm** **Exceptions.2019.03.4.3.v2.4.xlsxm**

Including the latest PP

Exceptions.2019.03.4.3.v2.4 [Read-Only] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat G2 CLO

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1							Total Population	Total Population Count	Total Exception Population	Total Exception Count	MV Resolved	MV Resolved	MV Pending Resolution	Priced by IVFA Analysts	Priced by IVFA Analysts	Difference Conservative /	MV Difference	
2							CLO		2,289,455,458	25	2,289,455,458	100%	-	2,289,455,458	100%	(6,234,102)	0.4%	
3	Row Labels	Sum of Market Value USD	GAJ Count of Mar	Sum of MV Impact	Sum of MV Validated		CMBS		1,067,719,719	14	1,062,880,612	100%	4,839,106	1,062,880,612	100%	34,229,184	-0.8%	
4	CLO	2,289,455,458	25	(6,234,102)	2,289,455,458		Ext PP		1,105,352,252	16	894,139,049	81%	211,213,203	894,139,049	81%	13,248,586	-0.8%	
5	Yes	2,289,455,458	25	(6,234,102)	2,289,455,458		RMBS		2,098,386,114	49	2,012,902,263	96%	85,483,850	2,032,589,005	97%	(4,265,973)	1.9%	
6	CMBS	1,067,719,719	14	34,229,184	1,062,880,612		CDO		4,128,063,170	119	3,602,759,493	87%	525,303,677	4,058,050,012	98%	(98,394,602)	-2.4%	
7	No	4,839,106	2	-	-		Int PP		701,288,617	19	373,271,230	53%	328,017,388	373,271,230	53%	(6,765,454)	-1.8%	
8	Yes	1,062,880,612	12	34,229,184	1,062,880,612													
9	Ext PP	1,105,352,252	16	13,248,586	894,139,049													
10	Yes	894,139,049	10	13,248,586	894,139,049													
11	NA	211,213,203	6	-	-													
12	RMBS	2,098,386,114	49	(4,265,973)	2,032,589,005		CLO		2,289,455,458	25	2,289,455,458	100%	-	2,289,455,458	100%	(6,234,102)	0.4%	
13	No	85,483,850	4	2,526,852	19,686,742		CMBS		1,067,719,719	14	1,062,880,612	100%	4,839,106	1,062,880,612	100%	34,229,184	-0.8%	
14	Yes	2,012,902,263	45	(6,792,825)	2,012,902,263		Ext PP		1,105,352,252	16	894,139,049	81%	211,213,203	894,139,049	81%	13,248,586	-0.8%	
15	Grand Total	6,560,913,543	104	36,977,694	6,279,064,125		RMBS		2,098,386,114	49	2,012,902,263	96%	85,483,850	2,032,589,005	97%	(4,265,973)	1.9%	
16							CDO		4,128,063,170	119	3,602,759,493	87%	525,303,677	4,058,050,012	98%	(98,394,602)	-2.4%	
17							Int PP		701,288,617	19	373,271,230	53%	328,017,388	373,271,230	53%	(6,765,454)	-1.8%	
24																		
25	Row Labels	Sum of Market Value USD	GAJ Count of Mar	Sum of MV Impact	Sum of MV Validated													
26	Int PP	701,288,617	19	(6,765,454)	373,271,230													
27	Yes	373,271,230	8	(6,765,454)	373,271,230													
28	NA	328,017,388	11	-	-													
29	Grand Total	701,288,617	19	(6,765,454)	373,271,230													
30																		
31																		
32																		
33																		
34																		
35	Row Labels	Sum of Market Value USD	GAJ Count of Mar	Sum of MV Impact	Sum of MV Validated													
36	CDO	4,128,063,170	119	(98,394,602)	4,058,050,012													
37	FALSE	525,303,677	26	(35,022,441)	469,895,841													
38	TRUE	3,602,759,493	93	(63,372,161)	3,588,154,170													
39	Grand Total	4,128,063,170	119	(98,394,602)	4,058,050,012													
40																		
41																		

CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

From: Jiang, Bella
To: Chung, Albert
Cc:
Subject: GPRC files as of 2019/03/29

Sent: Wed 4/24/2019 9:33 AM

Message [Appendix Quarterly Valuation & Validation Requests.pptx] [Master - Price Exception Table with IVFA Analyst Mar2019.xls] [Unresolved Exceptions _20190329.xlsx]
[Resolved Exceptions Mar 2019.xlsx] [final_exception_report_20190329.xlsx]

Albert,

Attached pleased find GPRC files as of 2019/03/29.

Thanks,
Bella

final_exception_report_20190329 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat

R1	f _x	S	T	U	V	W	X	Y	Z	AA
1	Row Labels	Sum of Market Value USD GAA	Sum of IVFA N	Count of Sec ID (Primary)		Row Labels	Sum of Market Value USD GAA	Sum of IVFA N	Count of Sec ID (Primar	
2	Credit Securities	12,917,805,428	12,917,943,866	224		Credit Securities	12,917,805,428	12,917,943,866	224	
3	Resolved	12,554,010,259	12,564,463,593	218		Resolved	12,554,010,259	12,564,463,593	218	
4	Pending Resolution	363,795,169	353,480,273	6		Pending Resolution	363,795,169	353,480,273	6	
5	Common Equity	304,609,398	304,609,398	5		Common Equity	304,609,398	304,609,398	5	
6	Resolved	304,609,398	304,609,398	5		Resolved	304,609,398	304,609,398	5	
8	Resolved	45,109,829	44,041,699	2		Resolved	45,109,829	44,041,699	2	
9	Grand Total	13,267,524,656	13,266,594,964	231		Grand Total	13,267,524,656	13,266,594,964	231	
10										

CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

final_exception_report_reconciliation Mar 2019 new template(includes upside & downside) v1 - Microsoft Excel

Exception Report Tabs												
check		0.00										
Exception Report Tabs		42,598 1,170										
Total Check		42,598 1,170										
1. RMBS / ABS		Total Population	Total Population Count	Total Exception Population	Total Exception Count	MV Resolved	MV Pending Resolution	Priced by IVFA Analysts	Priced by IVFA Analysts	MV Difference Conservative (Aggressive)		
Product Type		MV (\$MM's)	#	MV (\$MM's)	#	MV (\$MM's)	MV (\$MM's)	%	MV (\$MM's)	%		
ABS / CMO				2,098	49	2,013	85	2,033	96.9%	-4 1.90%		
RMBS Exception												
Final Exception Rpt		2,098	49									
check		0										
2. CLO		Total Population	Total Population Count	Total Exception Population	Total Exception Count	MV Resolved	MV Pending Resolution	Priced by IVFA Analysts	Priced by IVFA Analysts	MV Difference Conservative (Aggressive)		
Product Type		MV (\$MM's)	#	MV (\$MM's)	#	MV (\$MM's)	MV (\$MM's)	%	MV (\$MM's)	%		
CLO				2,289	25	2,289	2,289	100.0%	-6 0.39%			
CLO Exception												
Final Exception Rpt		2,289	25									
check		0										
3. CMBS		Total Population	Total Population Count	Total Exception Population	Total Exception Count	MV Resolved	MV Pending Resolution	Priced by IVFA Analysts	Priced by IVFA Analysts	MV Difference Conservative (Aggressive)		
Product Type		MV (\$MM's)	#	MV (\$MM's)	#	MV (\$MM's)	MV (\$MM's)	%	MV (\$MM's)	%		
CMBS				1,068	14	1,063	5	1,063	99.5%	34 -0.85%		
CMBS Exception												
Final Exception Rpt		1,068	14									
check		0										
4. Credit Securities		Total Population	Total Population Count	Total Exception Population	Total Exception Count	MV Resolved	MV Pending Resolution	Priced by IVFA Analysts	Priced by IVFA Analysts	MV Difference Conservative (Aggressive)		
Product Type		MV (\$MM's)	#	MV (\$MM's)	#	MV (\$MM's)	MV (\$MM's)	%	MV (\$MM's)	%		
Credit Securities				12,918	224	12,554	364	12,918	100.0%	0.00%		
Credit Exception												
Final Exception Rpt		12,918	224									
check		0										

CA-1404693: Exception Report Distribution & Reconciliation - Walkthrough Example

From: Bhuskute, Hemant
To: Chung, Albert
Cc:
Subject: RE: Reconciliation of 3/31 Results

Sent: Wed 5/1/2019 11:03 AM

Appreciate the update.

I verbally approved the recon sheet on Friday, now approving the official sign-off after the update.

Regards,

Hemant

From: Chung, Albert
To: Bhuskute, Hemant
Cc:
Subject: Reconciliation of 3/31 Results

Sent: Wed 5/1/2019 10:57 AM

Hemant,

Attached is the reconciliation between the results received from Bella and Vadim vs. the 3/31 exception report. I know we reviewed the rec. this past Friday but I made a minor update to the upside / downside stat – impact is 1MM on the downside (no impact to the actual results). Can you please formally approve the rec? Thanks.



final_exception_...

CA-1404694: Code Change Review - Walkthrough Example

<http://livvspdasweb01.investments.aig.net/DSS2/Reports/PromoteRequests>

From: Bhuskute, Hemant
To: Chung, Albert
Cc: Vojjala, Sri
Subject: RE: Semi-Annual Code Change Review

Sent: Mon 4/22/2019 2:45 PM

Reviewed and Approved.

Regards,

Hemant

From: Chung, Albert
Sent: Thursday, April 18, 2019 12:53 PM
To: Bhuskute, Hemant <Hemant.Bhuskute@aig.com>
Cc: Vojjala, Sri <Sri.Vojjala@aig.com>
Subject: Semi-Annual Code Change Review

Hemant,

Below are all the code changes covering 1/1/19 – 4/18/19. Since we went live with the new stored procs for Feb 2019 month end, all changes done prior to 2/28/19 are covered as part of the go-live signoff and is not considered a subsequent change.

There is only 1 change done since then, ID 77153, which you previously signed off already. Please review and approve one more time – thanks!

From Requests

livvspdasweb01.investments.aig.net/DSS2/Reports/PromoteRequests?FromDate=01%... Search

Dev App Support Solutions Home Live Promote Requests Conventional Requests Click Once Applications

From Date: 1/1/2019 To Date: 4/18/2019 Contains: IVFA		Collection	Project	State	Urgency	Request Type	Created Date	Created By
73612	IVFA PROD - Trade Blotter Jan 2019	aigapps	CBIT	Closed	4) Critical	B) Database Only	1/8/2019 4:29:24 PM	Vojjala, Sri
73961	IVFA PROD - Exception Reports Price Compare vs Rec to Balance Sheet	aigapps	CBIT	Closed	4) Critical	B) Database Only	1/16/2019 11:00:06 AM	Vojjala, Sri
74179	IVFA PROD - Exception Reports Multiple GC Price Fix	aigapps	CBIT	Closed	4) Critical	B) Database Only	1/22/2019 9:19:35 AM	Vojjala, Sri
74996	IVFA PROD - Fiscal Year End Date Change	aigapps	CBIT	Closed	4) Critical	B) Database Only	2/6/2019 10:11:02 AM	Vojjala, Sri
75076	Update the IVFA process by removing condition on PRICEFROMSOURCEDATE	aigapps	CBIT	Closed	1) Low	B) Database Only	2/7/2019 1:01:18 PM	Rajesh Bodapaty
77153	IVFA PROD - Price Compare - Null elimination	aigapps	CBIT	Promoted to Prod	4) Critical	B) Database Only	4/2/2019 11:57:39 AM	Vojjala, Sri

Price Exception Validation

Control CA-1404695 (Risk – Medium, Frequency – Twice per Quarter)	
Description	Additional Description
Twice per quarter, the Independent Valuation and Financial Analytics (IVFA) managers perform a secondary review of the price validations of investment securities listed on the price exception report that were performed by their analysts. External prices or IVFA independently generated prices are utilized to validate current prices in order to determine that exceptions are within defined threshold based on IVFA policies. Prices are categorized as "resolved" or "exceptions pending resolution". The "exceptions pending resolution" items are aggregated and reported in the pricing package presented to the Global Pricing Review Committee (GPRC). Management review is evidenced via email approval of the price exception valuation schedules.	

On May 08 2019, Bella Jiang and Vadim Mezrin have verified that this control description is accurate for 2019.



CA-1404695: Price exception validation - Walkthrough Example (Credit)

final_exception_report_20190329 - Microsoft Excel

D148 Coyote Creek Mining Co, LLC SR SECD NT 4.39% Due 12/28/2040 Mo-28

	A	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	V
1																
2																
3	Sec ID (Primary)	Security Desc	Coupon	Maturity Date	Price Variance Priority	Stale Price Priority	Internally Priced Priority	Single Price Priority	Price Change Priority	AIG Asset Class 3	AIG Asset Class 4	Security GAA	Price Local GAA	FAS157 Price Source	Prior Price LCL GAA	Quantity
145	22100#AA1	Corvias Campus Living - USG, LLC SR SECD NT 5.3%	5.30000	01-Jul-2050	-1	5	5	5	5	Corporate Bond	Corporate Bond Secured	USD	109.18	PPPMATRIX	104.67	114,767,453
146	22279#AA2	Cousins Properties Incorporated SR UNSECD NT 2017-	3.91000	06-Jul-2025	-1	5	5	5	5	Corporate Bond	Corporate Bond Senior	USD	102.12	PPPMATRIX	100.28	43,000,000
147	22279#AB0	Cousins Properties Incorporated SR UNSECD NT 2017-	4.09000	06-Jul-2027	-1	5	5	5	5	Corporate Bond	Corporate Bond Senior	USD	103.04	PPPMATRIX	100.56	15,000,000
148	22406#AA8	Coyote Creek Mining Co, LLC SR SECD NT 4.39% Due 12/28/2040	4.39000	28-Dec-2040	-1	5	5	5	5	Corporate Bond	Corporate Bond Secured	USD	105.06	PPPMATRIX	102.09	118,637,019
149	22536#AA1	Credit Lease - Backed Pass -Through Trust - CGA Cap	3.96700	10-Dec-2035	-1	5	5	5	5	Corporate Bond	Credit Tenant Security	USD	98.51	PPPMATRIX	95.82	217,712,674
150	22576CE#4	Crescent Point Energy Corp. SR GTD NT O 3.78% Due 12-Jun-2023	3.78000	12-Jun-2023	-1	5	5	5	5	Corporate Bond	Corporate Bond Senior	USD	100.81	PPPMATRIX	99.60	35,000,000
151	22576CF#3	Crescent Point Energy Corp. SR GTD NT R 3.75% Due 20-Jun-2024	3.75000	20-Jun-2024	-1	5	5	5	5	Corporate Bond	Corporate Bond Senior	USD	100.56	PPPMATRIX	99.09	41,000,000

final_exception_report_20190329 - Microsoft Excel

Z148 =VLOOKUP(A148,'!IVFA\Global Securities Pricing\Formal Process\201904\PP\[PP_20190329_final.xlsx]Private Placements'!\$A\$3:\$L\$700,12,0)

	A	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH		
1															
2		18,641,132,227													
3	Sec ID (Primary)	Market Value USD GAAP	Exception Rating	IVFAOwner											
145	22100#AA1	125,303,106	Inmaterial: No Action Taken	Credit Analytics	109.5555	0.34%	125,734,057.47		Agreed	Validated by IVFA modeled price		CDS Spread	Financials Baa3	0	0
146	22279#AA2	43,911,600	Inmaterial: No Action Taken	Credit Analytics	102.7267	0.59%	44,172,481.00		Agreed	Validated by IVFA modeled price		CDS Spread	Financials Baa1	0	0
147	22279#AB0	15,456,000	Inmaterial: No Action Taken	Credit Analytics	103.3131	0.27%	15,496,965.00		Agreed	Validated by IVFA modeled price		CDS Spread	Financials Baa1	0	0
148	22406#AA8	124,640,052	Inmaterial: No Action Taken	Credit Analytics	104.6978	-0.34%	124,210,348.76		Agreed	Validated by IVFA modeled price		CDS Spread	Energy Baa1	0	0
149	22536#AA1	214,468,755	Inmaterial: No Action Taken	Credit Analytics	102.6782	4.23%	223,543,455.17		Agreed	Validated by IVFA modeled price		Similar traded (1-3 bonds)	Financials Baa3	0	0
150	22576CE#4	35,283,500	Inmaterial: No Action Taken	Credit Analytics	100.7602	-0.05%	35,266,070.00		Agreed	Validated by IVFA modeled price		Similar traded (1-3 bonds)	Energy Baa2	0	0
151	22576CF#3	41,229,600	Inmaterial: No Action Taken	Credit Analytics	100.764	0.20%	41,313,240.00		Agreed	Validated by IVFA modeled price		Similar traded (1-3 bonds)	Energy Baa2	0	0

CA-1404695: Price exception validation - Walkthrough Example (Credit)

Interpolation_Float_Q1_updAprQA_Apr22 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Paste Calibri 11 A A Wrap Text Custom \$ % , .00 .00 Conditional Formatting as Table Format Cell Insert Delete Format Cells

Font Alignment Number Styles Cells

AW2821 fx =IF(ISNA(AU2821),AV2821+AZ2821,AU2821)

	A	B	AO	AP	AQ	AR	AU	AV	AW
1	Interest Rate Index L	Name	User Defined 2	User Defined 4	Co	User Defined 3	Spread_S	LiquidityPl	spread + All_ Val
2		Q9857@AB1	Industrials	#N/A		Worleyparsons Finl Svc Pty Ltd	#N/A	#N/A	#N/A
816				#N/A			#N/A	#N/A	#N/A
817	266228E*2	Utilities		Utilities A3		Duquesne Light Company, Inc.	0.0168756	0.0025	0.01688
818	90350HAC3B	Healthcare		#N/A		US Anesthesia Partners, Inc.	#N/A	#N/A	#N/A
819	90350HAC3D	Healthcare		#N/A		US Anesthesia Partners, Inc.	#N/A	#N/A	#N/A
820	00121@AA0	Consumer Goods		#N/A		AGM Automotive LLC	#N/A	#N/A	#N/A
821	22406#AA8	Energy	Energy Baa1			Coyote Creek Mining Company	#N/A	0.0025	0.01350
822							#N/A	#N/A	#N/A

Algoritmics RiskWatch-4.6.1-0885-rhel-x86_64-5.2-gcc-4.3.3 - ANLT0023-rw.base 2019/03/29 - [Instruments M]

File Edit View Options Instrument Window Help

Interest Rate Index Linked Note

@WT interest rate index linked note(USD)

1	
Name	22406#AA8
Type	Interest Rate Index Linked Note
THEO/Price	104.6978 USD
THEO/Value	104.7100 USD
THEO/Accrued Interest	0.0122 USD
Spread Over Yield	1.3500 % MON actual/360
Maturity Date	2040/12/28
Call Schedule	
Amortization cashflow	2019/04/28 0.3831 USD, 2019/05...
Spread	0.0000 % ANNU actual/actual
Coupon Rate	4.3900 % MON 30/360
Underlying Curve Index	
User Defined 4	Energy Baa1
User Defined 3	Coyote Creek Mining Company
User Defined 2	Energy

CA-1404695: Price exception validation - Walkthrough Example (Credit)

From: Jiang, Bella
To: Isakov, Alexander
Cc:
Subject: RE: PP valuation as of 20190329

Sent: Wed 4/24/2019 9:40 AM

Alex,

The files have been reviewed and approved.

Thanks,
Bella

From: Isakov, Alexander
Sent: 2019/04/22 11:24
To: Jiang, Bella <Bella.Jiang@AIG.com>
Subject: PP valuation as of 20190329

Bella,
I have completed March end private Placement valuation.

All relevant files are saved in
<\\lvpwfs20\mktmg\IVFA\Global Securities Pricing\Formal Process\201904\PP>

While summary files are in
<\\lvpwfs20\mktmg\IVFA\Global Securities Pricing\Formal Process\201904\GPRC>

All corresponding UNIX files located @UNIX server wltvsalgo1.aigfpc.com in directory /home2/aisakov/PP

CA-1404695: Price exception validation - Walkthrough Example (Structured: RMBS)

RMBS Exceptions March 2019 v1.3 - Microsoft Excel																						
File	Home	Insert	Page Layout	Formulas	Data	Review	View	Acrobat	Security Warning Automatic update of links has been disabled													
A43			fx		61690PAH4																	
A	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S						
1	1	3	4	5	6	21							12	13	14	15	16					
8	Excep Repo	Excep Report	Excep Report	Excep Repo	Excep Report	Excep Repo	Excep Report	Excep Repo	Excep Report	Excep Repo	Excep Report	Excep Repo	Excep Report	Excep Report	Excep Repo	Excep Report	Excep Repo	Excep Report				
9	Security ID	ISIN	Security Desc.					Coupon	Maturity Date	Owner	Exception Rating	Price Variance Priority	Stale Price Priority	Internally Priced Priority	Single Price Priority	Price Change Priority	AIG Asset Class 3	AIG Asset Class 4	CRRN CY_CD	GC_PX	GC_PX_SRC	
38	52524VAQ2	US52524VAQ23	Lehman XS Trust SER 2007-15NCL 4A1 Fit % Due 08/25/2047					3.3855	53929	96.14875							RMBS Non-Agency	RMBS Option Arm	USD	87.3781	IDC	
39	52525LAQ3	US52525LAQ32	Lehman XS Trust SER 2007-14HCL A11 Fit % Due 07/25/2047					2.7955	53898	132.67							RMBS Non-Agency	RMBS Alt-A	USD	144.879	BMBG	
40	56081#AL4	0	Major League Baseball Trust SR SECD TERM NT 6 (ABS)					3.8	44540	0							ABS	Future Flow	USD	101.25	PPPBROK	
41	57643LNV4	US57643LNV44	MASTR Asset Backed Securities SER 2006-AB1CL A3A					5.91	49730	92.2849							RMBS Non-Agency	RMBS Alt-A	USD	92.2849	MARKIT	
42	59025GAA9	US59025GAA94	Merrill Lynch Mortgage Backed SER 2007-2CL 1A1 Fit % Due 08/25/2036					4.95	49912	99.64129							RMBS Non-Agency	RMBS PRIME	USD	92.32	AMHERS	
43	61690PAH4	US61690PAH47	Morgan Stanley ReRemic Trust SER 2013-R7CL 4B Fit % Due 12/26/2046					3.02988	53687	97.99691							RMBS Non-Agency	RMBS Alt-A	USD	91.6281	IDC	
44	61756XBT1	US61756XBT19	Morgan Stanley Mortgage Loan T SER 2007-15ARCL 5A1 Adj % Due 12/25/2					3.58926	50399	84.25238							RMBS Non-Agency	RMBS Option Arm	USD	73.1728	IDC	
45	65540WAP4	US65540WAP41	Nomura Resecuritization Trust SER 2015-4RCL 1A14 Fit % Due 03/26/2047					2.67038	53777	79.51933							RMBS Non-Agency	RMBS Option Arm	USD	85.4753	BMBG	
46	675748AF4	US675748AF41	Ocwen Residential MBS Corporat SER 1998-R1CL B2 Adj % Due 10/25/2040					3.9939	51434	31.4101							RMBS Non-Agency	RMBS PRIME	USD	31.4101	MARKIT	
7	1	17	20					21					Formula					Formula				
8	Excep Repo	Excep Rep	Excep Report	Excp Repo	Formula	Formula					Excp Rep	Formula	Formula					Formula				
9	Security ID	Px Last Month	IDC Px	IDC Challenge Revised Pric	IDC Manual	BMBG Px	ABS(% Diff vs. GC Px)	BMBG Challen ge Revised Pr	BMBG Challen ge Px Diff	BMBG Manual	ABS(% Diff vs. GC Px)	Markit Px	ABS(% Diff vs. GC Px)	Markit Challenge Revised Price	Revised Px Diff	Market Comments			Markit Manual	ABS(% Diff vs. GC Px)	Trade Px	Px Diff
38	52524VAQ2	85.6229			#N/A	0	100.00%		100.00%	#N/A	#N/A	96.14875	10.04%	94.00	7.58%	Amended, will bring this a tad lo			#N/A	#N/A	#N/A	#N/A
39	52525LAQ3	143.7886			#N/A	144.8793	0.00%		100.0%	#N/A	#N/A	132.67	8.43%	132.67	8.43%	Affirmed, We are inline with the			#N/A	#N/A	#N/A	#N/A
40	56081#AL4	101.25			#N/A	0	100.00%		100.0%	#N/A	#N/A	0	100.00%		100.00%		#N/A	#N/A	#N/A	#N/A	#N/A	
41	57643LNV4	93.2505	82.88		#N/A	0	100.00%		100.0%	#N/A	#N/A	92.2849	0.00%		100.00%		#N/A	#N/A	#N/A	#N/A	#N/A	
42	59025GAA9	92.32			#N/A	98.645132	6.85%		100.0%	#N/A	#N/A	99.64129	7.93%	99.64	7.93%	Affirmed, We are inline with the			#N/A	#N/A	#N/A	#N/A
43	61690PAH4	91.2581			#N/A	98.717217	7.74%		100.0%	#N/A	#N/A	97.99691	6.95%	98.00	6.95%	Affirmed, We are inline with the			#N/A	#N/A	#N/A	#N/A
44	61756XBT1	72.9075			#N/A	82.818381	13.18%		100.0%	#N/A	#N/A	84.25238	15.14%	84.25	15.14%	Affirmed. Assumption set is reas			#N/A	#N/A	#N/A	#N/A
45	65540WAP4	85.9713			#N/A	85.4753	0.00%		100.0%	#N/A	#N/A	79.51933	6.97%	79.52	6.97%	Affirmed, We are inline with the			#N/A	#N/A	#N/A	#N/A
46	675748AF4	47.0626			#N/A	0	100.00%		100.0%	#N/A	#N/A	31.4101	0.00%		100.00%		#N/A	#N/A	#N/A	#N/A	#N/A	
47	683453AA2	96.84			#N/A	0	100.00%		100.0%	#N/A	#N/A	0	100.00%		100.00%		#N/A	#N/A	#N/A	#N/A	#N/A	

CA-1404695: Price exception validation - Walkthrough Example (Structured: RMBS)

7	1	Excep Repo	Formula		22	23	= "Markit",MIN(Y10,AP10),IF(\$10="BMBG",MIN(AF10,AP10),MIN(Y10,AF10,AP10)),Y10:AP10))	Check	TRUE	TRUE										
8	Security ID	ABS(% Diff vs. GC Px)	# Broker Prices	Sum of PAR <This is actually Quantity>	Sum of MV <This is actually MV USD GAAP>	blank	vlookup	Input	Formula	Threshold Formulas	Formula									
9							PM Name	Validation Price	Diff	10%	7%	5%	3%	\$5 ?	MV Impact	Resolved?	Date Cleared	Resolution Comments	Resolution Bucket	V
38	52524VAQ2	100.0%		20,855,798	18,223,394		Ryan Fulmer	94.00	7.58%	TRUE	###	FALSE	FALSE	NA	1,381,050	Yes		Markit px within threshold	Validated by other alternate pricing source	M
39	52525LAQ3	100.0%		20,080,519	29,092,513		Ryan Fulmer	132.67	-8.43%	TRUE	###	FALSE	FALSE	NA	(2,451,689)	Yes		Markit px within threshold	Validated by other alternate pricing source	M
40	56081#AL4	100.0%		26,462,729	26,793,513		Tom Denkler	-	-100.00%	###	###	FALSE	FALSE	NA	(26,793,513)	NA		Cannot price. Structured		
41	57643LNV4	100.0%		50,010,652	46,152,305		Ryan Fulmer	-	-100.00%	###	###	FALSE	FALSE	NA	(46,152,305)	Yes		Intex px within threshold	Validated by IVFA modeled price	
42	59025GAA9	100.0%		19,900,537	18,372,176		Ryan Fulmer	98.65	6.85%	TRUE	TRUE	FALSE	FALSE	NA	1,258,735	Yes		BMBG px within threshold	Validated by other alternate pricing source	BI
43	61690PAH4	100.0%		16,803,108	15,396,367		Ryan Fulmer	98.00	6.95%	TRUE	TRUE	FALSE	FALSE	NA	1,070,158	Yes		Markit px within threshold	Validated by other alternate pricing source	M
44	61756XB1	100.0%		19,015,500	13,914,178		Ryan Fulmer	82.82	13.18%	###	###	FALSE	FALSE	NA	1,834,156	No		Pending Resolution		BM
45	65540WAP4	100.0%		55,103,468	47,099,850		Ryan Fulmer	79.52	-6.97%	TRUE	TRUE	FALSE	FALSE	NA	(3,281,946)	Yes		Markit px within threshold	Validated by other alternate pricing source	M
46	675748AF4	50.1%		8,333,700	2,617,622		Ryan Fulmer	47.16	50.14%	###	###	FALSE	FALSE	15.7	1,312,549	No		Pending Resolution		JPI
47	683453AA2	100.0%		67,944,146	65,797,109		#N/A	-	-100.00%	###	###	FALSE	FALSE	NA	(65,797,109)	NA		Cannot price. Structured		
9	Security ID	Resolution Vendor/Broker	GPC Bucket	Challenge Success Category	Px Change Recommended	Px Source Change Recommended	IVFA Validation Px Last Month E	Last Month Resolution			Intex Collateral Type	Yield Lookup Category (Prior Month)	Final Yield Lookup Category	Intex Tranche Type	BofA Yield to Calc Px in Intex	Intex Price	% Diff	Weighted Average Comparable IDC Yield	Weighted Avg. Comp. I	Intex Price w/ Weighted Avg. Comp. I
38	52524VAQ2	Markit						BOFA px within threshold			Option ARM		Subprime	SEN_FLT	3.581%	102.23	17.0%			
39	52525LAQ3	Markit						Markit px within threshold			ALT_A		Alt-A	SEN_SPR_FLT	3.798%	92.65	36.0%			
40	56081#AL4							Cannot price. Structured Private			Error		Error	NA	Error	#VALUE!				
41	57643LNV4							IDC px within threshold			Subprime		Subprime	SEN_FIX_CAP	3.581%	96.73	4.8%			
42	59025GAA9	BMBG						BMBG px within threshold			Prime		Prime	SEN_SPR_FLT	3.633%	105.84	14.6%			
43	61690PAH4	Markit						Markit px within threshold			ALT_A,Option ARM		Alt-A	JUN_WAC	3.798%	94.44	3.1%			
44	61756XB1	BMBG						Markit px within threshold			ALT_A,Option ARM		Alt-A	SEN_SPR_WAC	3.798%	91.00	24.4%			
45	65540WAP4	Markit						Markit px within threshold			Option ARM,Subprime,ALT_A,Prime		MEZ_WAC	NA	NA	#VALUE!				
46	675748AF4	JPM						#N/A			Arreage			JUN_FIX	NA	NA	#VALUE!			

CA-1404695: Price exception validation - Walkthrough Example (Structured: RMBS)



MSG-101141131 | Salesforce Case# 02418323

Identifier Identifier Name Key Attributes	Status Associated Comments	Batch Challenge Type Value(s) Challenged Suggested Price(s) Challenged Data Publish Date	Challenge Id Challenge Result	Prior Value Prior Value - Bid Price Prior Value - Ask Price Prior Value - Mid Price	Post Value Post Value - Bid Price Post Value - Ask Price Post Value - Mid Price
75114GAA7 RALI Series 2008-QO4 Trust --	Confirmed Affirmed. Assumption set is reasonable based on collateral performance. Believe our price represents a fair market value.	N1600 Challenge Bid Price 96 29-Mar-2019	DCS-109811732 IHS Markit Level Confirmed	101.33731 101.33731 103.33731 102.33731	101.33731 101.33731 103.33731 102.33731
74922JAA6 RALI Series 2007-QH2 Trust --	Confirmed Affirmed. Assumption set is reasonable based on collateral performance. Believe our price represents a fair market value.	N1600 Challenge Bid Price 82 29-Mar-2019	DCS-109811731 IHS Markit Level Confirmed	92.14623 92.14623 94.14623 93.14623	92.14623 92.14623 94.14623 93.14623
65540WAP4 Nomura Resecuritization Trust 2015-4R --	Confirmed Affirmed. We are inline with the performance and spread inline with the market.	N1600 Challenge Bid Price 85 29-Mar-2019	DCS-109811730 IHS Markit Level Confirmed	79.51933 79.51933 81.01933 80.26933	79.51933 79.51933 81.01933 80.26933
61690PAH4 Morgan Stanley Resecuritization Trust 2013-R7 --	Confirmed Affirmed. We are inline with the performance and spread inline with the market.	N1600 Challenge Bid Price 92 29-Mar-2019	DCS-109811729 IHS Markit Level Confirmed	97.99691 97.99691 99.49691 98.74691	97.99691 97.99691 99.49691 98.74691

CA-1404695: Price exception validation - Walkthrough Example (Structured: RMBS)

From: Mezrin, Vadim
To: Horsford, Colin
Cc:
Subject: RE: RMBS Valuation Results - March 2019

Sent: Wed 5/1/2019 9:47 AM

Approved

From: Horsford, Colin
Sent: Tuesday, April 23, 2019 3:14 PM
To: Mezrin, Vadim
Subject: RE: RMBS Valuation Results - March 2019

See updated v1.3.

From: Horsford, Colin
Sent: Tuesday, April 23, 2019 1:40 PM
To: Mezrin, Vadim
Subject: RMBS Valuation Results - March 2019

Vadim,

Attached are the RMBS valuation results for March 2019.

[Colin Horsford](#)
[AIG](#)
Independent Valuation & Financial Analytics

CA-1404696: GPRC Deck Review by Head of IVFA - Walkthrough Example

From: Bhuskute, Hemant
To: Chung, Albert
Cc:
Subject: RE: Final Review of GPRC Package

Sent: Fri 4/26/2019 4:30 PM

Reviewed and Approved.

Regards,

Hemant

From: Chung, Albert
To: Bhuskute, Hemant
Cc:
Subject: RE: Final Review of GPRC Package

Sent: Fri 4/26/2019 3:53 PM

Attached is the GPRC package and appendix. 212 770 7115 is my number or I can call you. After the call, please review and approve – thanks!



Q1'19 GPRC
Package.pdf



Q1'19 GPRC
Appendix.pdf

-----Original Appointment-----

From: Chung, Albert
Sent: Tuesday, April 23, 2019 9:46 AM
To: Chung, Albert; Bhuskute, Hemant
Subject: Final Review of GPRC Package
When: Friday, April 26, 2019 4:00 PM-4:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Hemant's Cell Phone

Waiting for result; moving the meeting to allow more time for collation.

Final review of GPRC deck before sending out.

CA-1404696: GPRC Deck Review by Head of IVFA - Walkthrough Example

Q1'19 GPRC Appendix.pdf - Adobe Acrobat Pro 2017

File Edit View Window Help

Home Tools Q1'19 GPRC App...

1 / 70

AIG

GLOBAL PRICING REVIEW COMMITTEE MEETING – Q1 2019
Post-Close

SECTION VI

Appendix

Pages

1. Price Verification Summary and Detail 2 - 13
 2. IDR Price Exception Reporting Metrics 14 - 16
 3. Additional Price Verification Macro Metrics 17 - 23
 4. Legacy CDS Valuation (FP) 24
 5. Derivatives Price Verification 25 - 28
 6. Credit Valuation Adjustment (CVA) 29
 7. Alternative Investments (HF & PE) 30 - 31
 8. Corporate Valuation and Validation Requests 32
 9. Quarterly Changes in Hierarchy / New Overrides 33 - 34
 10. Monthly Valuation Memos 35 - 63
 11. Prior quarter GPRC meeting minutes (final) 64 - 70

March Price Verification Summary (Fair Valued Bonds & Equities)

MVs/MVs	A+B			A+A1+A2+A3			A1			A2			A3			B+C+D			C			D															
	Total Population			Multiple Price Sources			Within MV & Outside % Off Threshold			Single Price Source & <\$25MM MV			A2/A3 Non-Exceptions Verified During Prior Research Month			Total Exceptions			Resolved			Unresolved															
	Count	MV	Count	Count	MV	Count	Count	MV	Count	MV	Count	MV	Count	MV	% of A+B	Count	MV	Count	MV	Count	MV																
Public Securities																																					
RMBS / ABS	5,132	38,430	5,063	36,331	4,495	33,425	484	2,625	80	279	327	11%	49	2,058	2,013	85	25	2,288	2,288	14	1,063	1,063	5														
CLO	540	8,547	515	6,258	223	4,026	3	38	290	2,199	1,735	78%	39	254	157	41%	224	12,918	12,554	364	5	305	305	2													
CMTS	770	13,549	756	12,462	704	12,099	13	86	86	2,199	1,735	78%	50	462	1,456	423%	2,213	47%	1,056	1,056	1,063	1,063															
Credit	12,348	142,718	12,128	129,803	10,618	125,163	50	462	1,456	4,236	2,213	47%	446	524	2	5	1	1	438	518	308	59%	5	305	305	2											
Common and Pfd Equity	446	829	441	524	2	5	1	1	1	438	518	308	59%	1,712	17,102	1,563	16,508	1	26	148	568	350	59%	2	45	45	2										
Municipals	1,764	17,347	1,712	17,102	1,563	16,508	1	26	148	568	350	59%	Sub-total	20,990	221,228	20,613	202,497	17,608	191,167	553	3,236	2,451	8,094	5,096	45%	359	18,723	18,269	454	359	18,723	18,269	454	359	18,723	18,269	454
Private Placements																																					
Internally Priced Credit	897	17,940																																			
Internally Priced Structured	32	703																																			
Externally Priced Structured	355	7,029	140	5,923	136	5,745	2	32	11	146	52	29%	355	355	2	32	11	146	52	29%	732	19,746	18,754	992	355	355	355	355									
Private Placement Sub-total	881	25,670	140	5,923	136	5,745	2	32	11	146	52	29%																									
CDSs																																					
CDS	119	4,128																																			
Total	21,980	251,016	20,780	206,420	17,744	196,313	554	3,210	2,462	8,041	5,142	45%	1,170	42,598	40,626	1,972																					
			A+B		A+A1+A2+A3		A1		A2		A3							B+C+D		C		D															

The ~\$208BN of Non-Exceptions can be expanded into 3 sub-categories:

- A1 – Strong Price Convergence: ~\$197BN have at least 1 alternate price that is within threshold for a) price difference and b) MV difference
- A2 – Weaker Price Convergence & Low MV Difference: ~\$3BN have alt. prices outside price difference thresholds but within MV difference threshold
- A3 – Single Price Source & <\$25MM MV: ~\$8BN do not have any alternate prices

IVFA was able to resolve ~\$41BN out of ~\$43BN of exceptions; ~\$2BN remain a work in progress / unresolved:

- Internally Priced Credit/ Private Placements: continued all time lows of ~\$0.4BN
- Externally Priced Structured/ Private Placements: decrease from \$0.7BN (Q4'18) to \$0.2BN (Q1'19)
- Unresolved exceptions are highlighted in quarterly Front Office Signoff packages
 - Distribution of Q1'19 signoff packages expected next week

Price Hierarchy Review

Control CA-1402811 (Risk – Low, Frequency –Annually)

Description	Additional Description
Annually, the Senior Governing Body(SGB) of the Global Pricing Review Committee (GPRC) reviews and approves the pricing hierarchies that pertain to fair valued bonds and equities that are reported on AIG's consolidate balance sheet. The approval is evidenced via meeting material distribution for the SGB meeting in conjunction with the subsequent GPRC meeting minutes.	

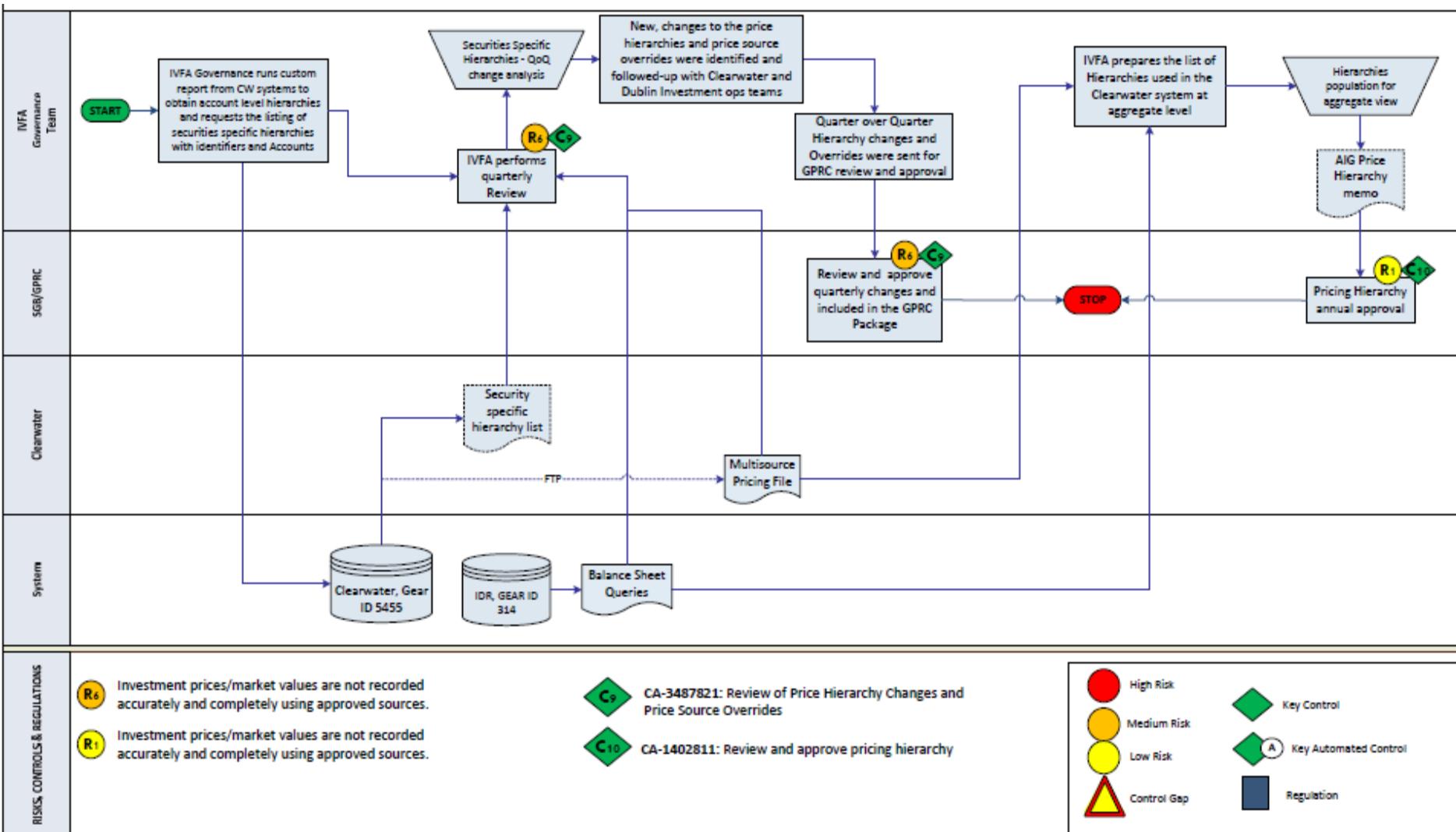
Control CA-3487821 (Risk – Medium, Frequency –Quarterly)

Description	Additional Description
Quarterly, a listing of new 1) price hierarchy changes and 2) price source overrides is reviewed and approved by the Senior Governing Body (SGB). The SGB review is evidenced by the inclusion of these changes within the quarterly GPRC packages and subsequent GPRC meeting minutes.	

On May 08 2019, Albert Chung has verified that this control description is accurate for 2019.



Price Hierarchies Review Process Flowchart



CA-1402811: Price Hierarchy Approval - Walkthrough Example

AIG Price Hierarchies Covering Fair-Valued Bonds & Equities

Overview

The price used to value a security is based on a "Hierarchy" or "waterfall" of price sources. Vendors provide the majority of coverage to AIG's GAAP fair-valued bond and equity portfolio. Price hierarchies are reviewed and approved annually by the Senior Governing Body (SGB) of the Global Pricing Review Committee ("GPRC"). New price sources are also reviewed and approved by the SGB (which may occur post-implementation for operational efficiency).

Price Hierarchies as of 11/30/18

As instructed by AIG, Clearwater has implemented a multi-hierarchy approach to manage AIG's asset pricing process. The 11 price hierarchies in place as of 11/30/18 are listed below.

#	Hierarchies*	MV	Count	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7	Comments
1	Default Hierarchy Security Count (GC/ Available)	218,912	18,018	IDC 16,548 / 16,548	BVAL 344 / 16,204	Markit 85 / 16,310	Asset Manager 754 / 762	Broker 48 / 1,544	AIG-Provided 157 / 372	40 / 40 AIG trades price (latest) as last resort	Majority of the fair-valued bond / equity portfolio
2	Bank Loans	6,266	3,559	BVAL	Markit	Asset Manager	Broker	AIG-Provided			Bank loans, including leveraged loans (Privates)
3	CDO	664	61	Asset Manager	Broker	AIG-Provided					CDOs only, excluding CLOs
4	CLO	7,574	554	Markit	Asset Manager	Broker	AIG-Provided				CLOs only
5	Affordable Housing	549	141	Asset Manager (Gifford Fong)	Broker	AIG-Provided					Affordable housing securities - Gifford Fong sits at the top of the hierarchy
6	Securitization	4,900	33	AIG-Provided	IDC	BVAL	Markit	Asset Manager	Broker		Securitizations, mostly intercompany / eliminates in consolidation. The 2 externally facing positions are SDLP CLOs
7	BVAL->Markit->IDC	156	8	BVAL	IDC	Markit	Asset Manager	Broker	AIG-Provided		Front Office initiated / legacy approved hierarchy where BVAL sits at the top of the hierarchy for a specific list of securities
8	BVAL->BVAL->IDC	135	7	BVAL	Markit	IDC	Asset Manager	Broker	AIG-Provided		Front Office initiated / legacy approved hierarchy where BVAL sits at the top of the hierarchy for a specific list of securities
9	Markit->BVAL->IDC	220	11	Markit	BVAL	IDC	Asset Manager	Broker	AIG-Provided		Front Office initiated / legacy approved hierarchy where Markit sits at the top of the hierarchy for a specific list of securities
10	Markit->IDC->B VAL	388	15	Markit	IDC	BVAL	Asset Manager	Broker	AIG-Provided		Front Office initiated / legacy approved hierarchy where IDC sits at the top of the hierarchy for a specific list of securities
11	Broker->Markit->BVAL	2	1	Broker	Markit	BVAL					
Total**		240,006	22,595								

* Only the following 4 individuals have the ability to override pricing: Janine Mullin, Jonathan Lawless, Derek Montaner, Matthew Dattolico

** Includes ~\$242MM / 187 positions housed outside of CW systems (e.g. JAVAH, Malaysian bonds)

CA-1402811: Price Hierarchy Approval - Walkthrough Example

IVFA reviewed securities that utilize the Default Hierarchy to confirm that this primary hierarchy works as expected. For example, IVFA confirmed that BVAL was used as Golden Copy (GC) for a given security if both BVAL and MarkIT prices were available but an IDC price was not available.

Observations: Out of ~18,000 securities, IVFA noted the following:

- There are 9 securities where an IDC price was available on IDC's web portal but IDC was not utilized as the GC
- There is 1 security where a MarkIT price was available in CW systems but TDSEC was utilized as the GC instead

IVFA followed-up with Clearwater and is awaiting response.

#	SedD	Sec Desc	AIG Asset Class 3	11/30 GC Px	11/30 GC Source	Notional Local CCY MMs	MV USD MMs	11/30 IDC Price	Potential USD MV Impact MMs
1	525ESC3F4	LEHMAN BROTHERS HLDG ESCROW COM	Common Equity	1.87	DEMINBV	31	57	2.03	4.88
2	XS1904650048	BNG BANK NV BNG 3 1/8 11/08/21	Corporate Bond	100.24	BMBG	8	8	100.25	.00
3	U74079AG6	N ETFLUX INC NFLX 3 5/8 05/15/27	Corporate Bond	97.85	BMBG	7	7	97.00	-.06
4	BCC2FC2Q8	JAPAN HOUSING FINANCE AGENCY SER 26-JAN-18-129CL1.4600	RMBS Non-Agency	100.29	BMBG	679	6	100.98	.04
5	115027NN0	BROWARD CNTY FLHSC FIN AUTH MVAR--CYPRESS GROVE APTS	Regional Govt	100.00	BMBG	4	4	100.00	.00
6	BCC2I2BU4	Turbo Finance PLC SER 08-NOV-18-8CL A	ABS	100.00	CONN ING	2	2	100.06	.00
7	EK99889840	KENYA TREASURY BOND KENGB 13.193 06/22/20	National Govt	103.50	BMBG	90	1	104.43	.01
8	JK8713006	KENYA TREASURY BOND KENGB 14.334 04/19/21	National Govt	106.99	BMBG	80	1	107.15	.00
9	524ESCC81	LEHMAN BROTHERS HLDG ESCROW COM	Common Equity	-	TRADEPX	2	2	2.03	.04

SubTotal 86 4.91

#	SedD	Sec Desc	AIG Asset Class 3	11/30 GC Px	11/30 GC Source	Notional Local CCY MMs	MV USD MMs	11/30 MarkIT Price	Potential USD MV Impact MMs
1	45779BBB4	INSTITUTIONAL MORTGAGE SECURITIES SER 2013-3CLB 4.164000%	CMBS Non-Agency	100.22	TDSEC	5	4	97.08	-.13
								SubTotal 4	
								Total 90	4.78

Quarterly Monitoring for Changes

IVFA monitors for changes on a quarterly basis and reports these changes in the GPRC package:

- New hierarchies implemented / changes to hierarchy source ranking
- Securities that moved from 1 hierarchy into another hierarchy
- New price overrides used for quarter-end pricing

CA-1402811: Price Hierarchy Approval - Walkthrough Example

From: Chung, Albert
To: Bhuskute, Hemant; Allison, Timothy William; DeTommaso, Stephen; Hespe, Bill; Mullin, Janine; Campbell, Lee
Cc: Yin, Cassie
Subject: RE: Follow-up on 2018 Price Hierarchy Memo / Observations

Sent: Mon 1/28/2019 7:50 PM

As a follow-up on the 10 securities noted on p.2, below are the 2 primary reasons why an IDC price was not used as GC for 11/30 under the default hierarchy:

- Identifier mismatch between CW systems and IDC's systems
 - Corrective measures are being taken in January so that IDC prices begin pulling in
- IDC did not publish "current" 11/30/18 pricing (non-issue)
 - My previous analysis was performed using a section of IDC's website that extracted 11/30/18 pricing but the actual price date was stale and not apparent in the output; therefore the non-IDC pricing source used for 11/30 GC was appropriate

There are 2 securities where "source blacklisting" is still in place – blacklisting was the initial plan during the GPS->CW transition in May 2018 but was changed over to the security specific hierarchies approach in June 2018. This achieved the same effect since omitting a price source within a certain hierarchy had the same impact as blacklisting that source. We are working with CW to remove source blacklisting for these 2 remaining securities and to place them in the appropriate hierarchy.

Let me know if you have any questions – thanks.

From: Chung, Albert
Sent: Thursday, December 20, 2018 11:00 AM
To: Bhuskute, Hemant <Hemant.Bhuskute@aig.com>; Allison, Timothy William <Timothy.Allison@aig.com>; DeTommaso, Stephen <Stephen.DeTommaso@AIG.com>; Hespe, Bill <Bill.Hespe@aig.com>; Mullin, Janine <Janine.Mullin@aig.com>; Campbell, Lee <Lee.Campbell@AIG.com>
Cc: Yin, Cassie <Cassie.Yin@aig.com>
Subject: RE: Q3'18 SGB Pre-Close Meeting

As reviewed during today's SGB meeting, below are the price hierarchies covering the GAAP fair-valued bond and equity portfolio. If there are any concerns / questions, please raise them by 5PM NY time, Monday, 12/24/18. Otherwise, the hierarchies will be deemed SGB-approved.



AIG Price Source
Hierarchies 2...

I am also re-attaching the price hierarchy memo below for reference. Minor updates were made to the 2 tables on p.2 (added asset class 3 and corrected the SecID in the 2nd table) – no other changes made. Thanks.

<< OLE Object: Picture (Device Independent Bitmap) >>

CA-3487821: Price Hierarchies Change review - Walkthrough Example

From: Chudy, Jeff
To: Chung, Albert
Cc:
Subject: RE: Review of Price Hierarchy Changes / Overrides

Sent: Wed 4/24/2019 5:10 PM



Reviewed and approved.

From: Chung, Albert
Sent: Wednesday, April 24, 2019 5:09 PM
To: Chudy, Jeff <Jeff.Chudy@aig.com>
Subject: RE: Review of Price Hierarchy Changes / Overrides

Thanks for going through my work for the past hour. Please confirm you reviewed the work and logic on how I produced the final result and approve. Thanks.

<< File: 6.09 Price Hierarchy QoQ Changes.pptx >>
<< OLE Object: Picture (Device Independent Bitmap) >>

-----Original Appointment-----

From: Chung, Albert
Sent: Wednesday, April 24, 2019 3:18 PM
To: Chung, Albert; Chudy, Jeff
Subject: Review of Price Hierarchy Changes / Overrides
When: Wednesday, April 24, 2019 4:00 PM-4:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where:

This is the quarterly review of securities with changes in hierarchy and new overrides for the quarter. I am performer, you are reviewer. Thanks.

CA-3487821: Price Hierarchies Change review - Walkthrough Example

From: Micah Neely <mneely@clearwateranalytics.com>
To: Chung, Albert; AIG_CWPricing
Cc: Chudy, Jeff
Subject: [EXTERNAL] RE: Security Specific Hierarchies
Message Pricing Category Logic 04012019.txt

Sent: Mon 4/1/2019 9:

Caution: External Email

And pricing category for individual securities can be found on BS website reports add field "Pricing Category".

100 %

Results Messages

	Hierarchy_Cue	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7
1	NULL	Ovemide (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)
2	BIM	Ovemide (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)
3	BL	Ovemide (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL
4	BMI	Ovemide (Daily)	BVAL (Daily)	Markit (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)
5	BRMB	Ovemide (Daily)	Broker (Daily)	Markit (Daily)	BVAL (Daily)	NULL	NULL	NULL
6	CDO	Ovemide (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL
7	CLO	Ovemide (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL
8	DBV	Ovemide (Daily)	Client (Daily)	NULL	NULL	NULL	NULL	NULL
9	G-FONG	Ovemide (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL
10	MBI	Ovemide (Daily)	Markit (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)
11	MIB	Ovemide (Daily)	Markit (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)
12	SEC	Ovemide (Daily)	Client (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)

Pricing Category Logic 04012019 - Notepad

File Edit Format View Help

```
IF FIELD Security ID EXISTS IN [ 343517 ] THEN Display ---
ELSE IF FIELD Identifier EXISTS IN [ Y6912H216, 999PN4$68, 999PN4$67, 38655V208, 5561412*9, 924997109, 999PP8$33, 89156#127, 999PP8$32, 999PN4$69, 93933VBB3, 619990906, 60470#1:AIG, 02770*9A4, 001991645, 29445FCX4, 073879QH4, 00009AMR6, 542514KG8, 754991115, Y6912H240, 94982BAL4, 21299ADN0AIG, 07386HTJ0, 716995105, 45890A2#1, Y6912H257
HEN Display DBV
ELSE IF FIELD Identifier CONTAINS 525ESC AND FIELD Description CONTAINS Lehman THEN Display DBV
ELSE IF FIELD Identifier CONTAINS 524ESC AND FIELD Description CONTAINS Lehman THEN Display DBV
ELSE IF FIELD Account ID EXISTS IN [ 128551,128554,128559,128560,128563,128563,128564,128568,128570,128573,128574,128575,128575,128582,128588,128589,128597,128602,128605,128609,12861
ELSE IF FIELD Identifier EXISTS IN [ 23910RAF8, 239156AG7, 23910RAB7 ] THEN Display SEC
ELSE IF FIELD Security ID EXISTS IN [ 1478488, 1478492, 1478491, 1478490, 1507325, 1507328, 1507326, 1507323, 1507327, 1507324, 1357025, 1360713, 1357024, 1357023, 1562
51, 136050, 1360628, 1625052, 1360625, 1360620, 1360619, 1360618, 1360617, 1507375, 1507377, 1356905, 1356904, 1356903, 1356902, 1360590, 1356900, 1356899, 13
6029, 1360690, 1356028, 1360691, 1360692, 1360693, 1360694, 1360695, 1360696, 1356040, 1356043, 1356041, 1356042, 1356045, 1356030, 1356044, 1356018, 1356047, 1356049,
ELSE IF FIELD Identifier EXISTS IN [ 45779BBB4, P3661QAE9 ] THEN Display BRMB
ELSE IF FIELD Security ID EXISTS IN [ 1477388, 1676501, 1768521, 1678881 ] THEN Display BRMB
ELSE IF FIELD CUSIP CONTAINS 69374JB THEN Display BRMB
ELSE IF FIELD Security ID EXISTS IN [ 1351436, 1352722, 1353281, 343388, 1345926, 1352690, 1354254 ] THEN Display BMI
ELSE IF FIELD Security ID EXISTS IN [ 1355398, 280654, 1352328, 1351619, 1355388, 1355331, 1350118, 1349808, 1355762, 346610, 1351472 ] THEN Display MBI
ELSE IF FIELD Security ID EXISTS IN [ 1351427, 1350043, 1355764, 810231, 1351540, 54741, 1351591, 1351562, 1351831, 1351438 ] THEN Display BIM
ELSE IF FIELD Security ID EXISTS IN [ 1351628, 1349812, 1312879, 1355399, 1349822, 1351969, 1355843, 280031, 1349811, 1351289, 1352712, 83588, 1350012, 1351266, 1350015
ELSE IF FIELD Security ID EXISTS IN [ 135272, 1354895, 1354896, 1354897, 1354898, 1354899, 1354900, 1354901, 1354902, 1354903, 1354904, 1354905, 1354906, 1354907, 135490
, 1356007, 1356008, 1356009, 1356010, 1356011, 1356012, 1356013, 1356015, 1356016, 1356017, 1356897, 1356907, 1356908, 1356911, 1356912, 1356913, 1356914, 1356916, 1356
ELSE IF FIELD Security Type EQUALS BANK LOAN THEN Display BL
ELSE IF FIELD Security ID EXISTS IN [ 1353286, 1352682, 1350080, 1350078, 1350074, 1350073, 817630, 817640, 817648, 1350130, 1350133, 1350134, 1350136, 1350137, 1350138
ELSE IF FIELD CLO EQUALS true THEN Display CLO
ELSE IF FIELD CDO EQUALS true AND FIELD CLO EQUALS false THEN Display CDO
ELSE Display ---
```

CA-3487821: Price Hierarchies Change review - Walkthrough Example

Price Hierarchy and Override Control Q1'19 - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Albert's Comments		Hierarchies as of 3/31/19	Asset Type	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7		Notes
3	no change			NULL	Override (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)		
4	no change			BIM	Override (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)		
5	no change			BL	Override (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL		
6	no change			BMI	Override (Daily)	BVAL (Daily)	Markit (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)		
7	no change			BRMB	Override (Daily)	Broker (Daily)	Markit (Daily)	BVAL (Daily)	NULL	NULL	NULL		
8	no change			CDO	Override (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL		
9	no change			CLO	Override (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL		
10	Deminimous book value hierarchy added			DBV	Override (Daily)	Markit (Daily)	NULL	NULL	NULL	NULL	NULL		
11	no change			G-FONG	Override (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL		
12	no change			MBI	Override (Daily)	Markit (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)		
13	no change			MIB	Override (Daily)	Markit (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)		
14	no change			SEC	Override (Daily)	Client (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)		
15													
16													
17			Hierarchies as of 12/31/18										
18	Albert's Comments	daysStalenessOnE	Asset Type	Source 1	Source 2	Source 3	Source 4	Source 5	Source 6	Source 7			Notes
19	no change	0 y	NULL	Override (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)			
20	no change	0 y	BIM	Override (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)			
21	no change	0 y	BL	Override (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL			
22	no change	0 y	BMI	Override (Daily)	BVAL (Daily)	Markit (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)			
23	no change	0 y	BRMB	Override (Daily)	Broker (Daily)	Markit (Daily)	BVAL (Daily)	NULL	NULL	NULL			
24	no change	0 y	CDO	Override (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL			
25	no change	0 y	CLO	Override (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL			
26	no change	0 y	G-FONG	Override (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)	NULL	NULL	NULL			
27	no change	0 y	MBI	Override (Daily)	Markit (Daily)	BVAL (Daily)	IDC-SameDay (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)			
28	no change	0 y	MIB	Override (Daily)	Markit (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Asset Manager (Daily)	Broker (Daily)	Client (Daily)			
29	no change	0 y	SEC	Override (Daily)	Client (Daily)	IDC-SameDay (Daily)	BVAL (Daily)	Markit (Daily)	Asset Manager (Daily)	Broker (Daily)			

CA-3487821: Price Hierarchies Change review - Walkthrough Example

Price Hierarchy and Override Control Q1'19 - Microsoft Excel

E2 3/31

			D	E	F	G	H	I	J	K	
1	#	Asset Class	SecID	Sec Desc	3/31 Hierarchy	3/31 GC	12/31 Hierarchy	12/31 GC	3/31 Notional Local CCY	3/31 USD MV	Comments
5	3	Common Equity	524ESCA91	LEHMAN BROTHERS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	19,530,000	2	
6	4	Common Equity	524ESCC99	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROTHERS HOLDINGS, INC.	DBV	DEMINBV	Default	AT COST	11,000,000	2	
7	5	Common Equity	525ESC193	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	5,950,000	2	
8	6	Common Equity	524ESCB90	LEHMAN BROTHERS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	17,000,000	1	
13	11	Common Equity	525ESC1E9	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	3,000,000	1	
14	12	Common Equity	525ESCI33A1	LEHMAN BROTHERS HLDG ESCROW LEHMAN ESCROW	DBV	DEMINBV	Default	AT COST	2,500,000	1	
15	13	Common Equity	524ESCC81	LEHMAN BROTHERS HLDG ESCROW COM	DBV	DEMINBV	Default	TRADEXP	2,000,000	1	
16	14	Common Equity	524ESCD39	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	750,000	1	
17	15	Common Equity	524ESCXA3	524ESC704 BD	DBV	DEMINBV	Default	AT COST	2,000,000	0	
18	16	Common Equity	525ESC1U3	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	5,000,000	-	
19	17	Common Equity	524ESCTN4	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	2,048,000	-	
20	18	Common Equity	524ESCSQ5	LEHMAN BROTHERS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	2,000,000	-	
21	19	Common Equity	524ESCTM6	LEHMAN BROTHERS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	1,697,000	-	
22	20	Common Equity	524ESC704	LEHMAN BROTHERS HLDG ESCROW LEHMAN BROS HLDG ESCROW COM	DBV	DEMINBV	Default	AT COST	175,000	-	
23	21	Common Equity	25501G121	.NNAHJW	DBV	DEMINBV	Default	IDC	31	-	
24	22	Corporate Bond	93933VBC1	WASHINGTON MUTUAL BANK N WAMU 6 3/4 05/20/36	DBV	DEMINBV	Default	BMBG	39,325,000	-	
25	23	Corporate Bond	93933WA44	WASHINGTON MUT FA SUB NT 6 7/8% Due 6/15/2011 JD15	DBV	DEMINBV	Default	BMBG	35,086,000	-	
26	24	Corporate Bond	93933WAD8	WASHINGTON MUTUAL BANK F WAMU 0 01/15/15	DBV	DEMINBV	Default	BMBG	16,500,000	-	
27	25	Corporate Bond	93933VBV3	WASHINGTON MUTUAL BANK N WAMU 0 05/20/13	DBV	DEMINBV	Default	BMBG	15,000,000	-	
28	26	Derivative	25501G113	DITECH HLDG CORP WT EXP A	DBV	DEMINBV	Default	IDC	40	-	
29	27	Regional Govt	115027NND	BROWARD CNTY FL HSG FIN AUTHM VAR--CYPRESS GROVE APTS-SUB-BR	DBV	DEMINBV	Default	BMBG	4,270,000	-	
30	28	Corporate Bond	93933VA57	WASHINGTON MUTUAL BANK N WAMU 5 1/2 01/15/13	DBV	BMBG	Default	BMBG	22,750,000	1,138	Explanation above applies to these 4 positions as well.
31	29	Corporate Bond	93933VBA5	WASHINGTON MUTUAL BANK NV WAMU 5.95 05/20/13	DBV	BMBG	Default	BMBG	22,490,000	450	However, because of identifier change, the DBV hierarchy was not applied. Immaterial MV impact of
32	30	Corporate Bond	93933WAB2	WASHINGTON MUTUAL BANK F WAMU 5.65 08/15/14	DBV	BMBG	Default	BMBG	10,240,000	102	
33	31	Common Equity	63580R106	National Energy & Gas Transmis NLEY	DBV	AT COST	Default	AT COST	417,266	-	\$1,600
34											DBV Total 1,710
35	32	CMBS Non-Agency	45779BBB4	INSTITUTIONAL MORTGAGE SECURIT SER 2013-3CL B 4.164000% Due 12/12/2022	BRMB	TDSEC	Default	TDSEC	5,321,000	4,022,160	This was one of the few remaining securities that had source-blacklisting in place (for MarkIT). Placing security in BRMB would eliminate blacklisting while retaining TDSEC as the intended GC.
36											Broker->MarkIT-BMBG Total 4,022,160
37	33	RMBS Non-Agency	1881561XL3	Terwin Mortgage Trust SER 2005-14HFL AF4	RIM	RMRIG	Default	IDC	21,264,000	21,264,000	Front Office initiated / IVFA agreed hierarchy change
38	34	RMBS Non-Agency	88158AAA0	Terwin Mortgage Trust SER 2007-9SLCL A1	BIM	IDC	Default	IDC	9,218,509	3,154,942	from Default to BIM
39											BMBG->IDC->MarkIT Total 24,418,942
40	35	RMBS Non-Agency	007036VF0	Adjustable Rate Mortgage Trust SER 2005-11CL 3A1Adj% Due 02/25/2036	MIB	MARKIT	Default	IDC	8,696,960	8,299,944	
41	36	RMBS Non-Agency	362341D89	GSAA Home Equity Trust SER 2005-15CL 2A3	MIB	MARKIT	Default	IDC	39,263,021	30,949,767	Front Office initiated / IVFA agreed hierarchy change from Default to MIB
42	37	RMBS Non-Agency	61748HWV9	Morgan Stanley Mortgage Loan T SER 2006-3ARCL 3A1Adj% Due 03/25/2036	MIB	MARKIT	Default	IDC	15,093,345	14,189,453	
43											MarkIT->IDC->BMBG Total 53,439,164
44											

CA-3487821: Price Hierarchies Change review - Walkthrough Example

Price Hierarchy and Override Control Q1'19 - Microsoft Excel

D1 ffx 3/31 Hierarchy

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q
1	CW ID	Identifier	SEC_ID_PRIMARY	3/31 Hierarchy	12/31 Hierarchy	Check	3/31 GC	12/31 GC	3/31 QTY	3/31 MV	3/31 GC	12/31 GC	Check	Hierarchy	IVFA Final Comment	
12	93933VBB3	93933VBB3		DBV	#N/A	#N/A	DEMINBV	BMBG	15,000,000	-	DEMINBV	BMBG	FALSE	DBV	TRUE Janine confirmed - add to listing	
30	93933VBC1	93933VBC1		DBV	#N/A	#N/A	DEMINBV	BMBG	39,325,000	-	DEMINBV	BMBG	FALSE	DBV	TRUE Janine confirmed - add to listing	
82	525ESC318	525ESC318		DBV	#N/A	#N/A	DEMINBV	AT COST	5,000,000	1	DEMINBV	TRADEPX	FALSE	DBV	TRUE Janine confirmed - add to listing	
87	93933WAD8	93933WAD8		DBV	#N/A	#N/A	DEMINBV	BMBG	16,500,000	-	DEMINBV	BMBG	FALSE	DBV	TRUE Janine confirmed - add to listing	
104	93933WAA4	93933WAA4		DBV	#N/A	#N/A	DEMINBV	BMBG	35,086,000	-	DEMINBV	BMBG	FALSE	DBV	TRUE Janine confirmed - add to listing	
111	115027NN0	115027NN0		DBV	#N/A	#N/A	DEMINBV	BMBG	4,270,000	-	DEMINBV	BMBG	FALSE	DBV	TRUE Janine confirmed - add to listing	
															List this in GPRC package. CW comment "Assigned to DBV using Identifier in the logic, then the identifier subsequently changed. I've modified these to use security id instead. Identifier rarely changes, but security id should be even more stable"	
124	93933WAB2	93933WAB2		DBV	#N/A	#N/A	BMBG	BMBG	10,240,000	102	SOURCE UI	BMBG	FALSE	---	FALSE be even more stable"	
141	25501G121	25501G121		DBV	#N/A	#N/A	DEMINBV	IDC	31	-	DEMINBV	IDC	FALSE	DBV	TRUE Janine confirmed - add to listing	
158	25501G113	25501G113		DBV	#N/A	#N/A	DEMINBV	IDC	40	-	DEMINBV	IDC	FALSE	DBV	TRUE Janine confirmed - add to listing	
542	1351831	881561XL3		BIM	#N/A	#N/A			21,264,000	21,264,000	BMBG	IDC	FALSE	BIM	Front Office initiated / IVFA agreed hierarchy change from Default to BIM - Abort cc'd on email	
559	1349946	007036VF0		MIB	#N/A	#N/A			8,696,960	8,299,944	MARKIT	IDC	FALSE	MIB	Front Office initiated / IVFA agreed hierarchy change from Default to MIB - Abort cc'd on email	
560	1351965	362341D89		MIB	#N/A	#N/A			39,263,021	30,949,767	MARKIT	IDC	FALSE	MIB	Front Office initiated / IVFA agreed hierarchy change from Default to MIB - Abort cc'd on email	
561	1349984	61748HWV9		MIB	#N/A	#N/A			15,093,945	14,189,453	MARKIT	IDC	FALSE	MIB	Front Office initiated / IVFA agreed hierarchy change from Default to MIB - Abort cc'd on email	
799	48205YAA5	SEC	SEC	TRUE					308,523,485	186,348,190	PIMCO	PXSRVBOA	FALSE	SEC	TRUE	
813	524ESCXA3	DBV	#N/A	#N/A	DEMINBV	AT COST	2,000,000	0	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
814	524ESC639	DBV	#N/A	#N/A	DEMINBV	AT COST	750,000	1	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
815	524ESC7M6	DBV	#N/A	#N/A	DEMINBV	AT COST	1,697,000	-	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
816	524ESCA91	DBV	#N/A	#N/A	DEMINBV	AT COST	19,530,000	2	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
817	524ESCC81	DBV	#N/A	#N/A	DEMINBV	TRADEPX	2,000,000	1	DEMINBV	TRADEPX	FALSE	DBV	TRUE	Janine confirmed - add to listing		
818	524ESCB90	DBV	#N/A	#N/A	DEMINBV	AT COST	17,000,000	1	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
819	524ESC7N4	DBV	#N/A	#N/A	DEMINBV	AT COST	2,048,000	-	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
820	525ESC2X6	DBV	#N/A	#N/A	DEMINBV	AT COST	11,000,000	1	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
821	525ESC1N9	DBV	#N/A	#N/A	DEMINBV	AT COST	5,950,000	2	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
822	525ESC1C3	DBV	#N/A	#N/A	DEMINBV	AT COST	25,000,000	2	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		
823	525ESC4J5	DBV	#N/A	#N/A	DEMINBV	AT COST	3,000,000	1	DEMINBV	AT COST	FALSE	DBV	TRUE	Janine confirmed - add to listing		

Formatted for GPRC - Hierarchy Formatted for GPRC - Overrides 3.31.19 Hierarchy Compare Security Specific Hiera - 3.31 Security Specific Hiera - 12.31 3.31.19 IDR 12.31.1

CA-3487821: Price Hierarchies Change review - Walkthrough Example

		Price Hierarchy and Override Control Q1'19 - Microsoft Excel																				
		File Home Insert Page Layout Formulas Data Review View Acrobat																				
O3610		fx 3/29/2019																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
X	Account	Identifier	Description	Current Units	Currency	Security Type	Fair Value Level	Account Source Price	Market Price	AIG Price	Price From Source Date	Price Source	Markit Price	Markit Date	Net Unrealized Gain/Loss	Market Value	SEC_ID_PRI	BVAL Price	BVAL Date	Pricing Category		
3608	31398QXZ5	FHR 3741C PC	12872000 USD	FHLMC CMO	Level 2	104.67	104.6703	IDC	3/29/2019	IDC-Same	104.63	3/29/2019	833328.53	13473164	31398QXZ5	103.78	3/29/2019	---				
3609	3137A4ZS9	FHR 3794A PB	5000000 USD	FHLMC CMO	Level 2	107.26	107.2593	IDC	3/29/2019	IDC-Same	106.53	3/29/2019	133962.61	5362968	3137A4ZS9	106.49	3/29/2019	---				
3610	881561XL3	TMTS 0514HE AF4	21264000 USD	Other MTGE	Level 3	88.27	100	BMBG	3/29/2019	BVAL	94.72	3/29/2019	8702416.83	21264000	881561XL3	100.00	3/29/2019	BIM				
3611	3136AHPL8	FNR 13126C ZH	11573010.59 USD	FNMA CMO	Level 2	105.62	105.6235	IDC	3/29/2019	IDC-Same	106.66	3/29/2019	1341527.99	12223815	3136AHPL8	104.75	3/29/2019	---				

		Price Hierarchy and Override Control Q1'19 - Microsoft Excel																				
		File Home Insert Page Layout Formulas Data Review View Acrobat																				
O62125		fx 12/31/2018																				
1	2	3	4	5	6	7.00	8.00	9	10	11	12.00	1/13/1900	15	16	17	28	1/29/1900					
X	Account	Identifier	Description	Current Units	Curren	Securi	Fair	Accou	Market	AIG	Price	Price From	Price	Markit	Markit	Net	Market	SEC_ID_PRIM	BVAL	BVAL	Pricing	Category
62124	251563DW9	DMSI 0431A5	9,638,858 USD	Other MT	Level 3	99.63018997	99.6827	IDC	12/31/2018	IDC-Sam	103.55	12/31/2018	(2,508)	9,608,279	251563DW9	100	12/31/2018	---				
62125	881561XL3	TMTS 0514HE AF4	21,264,000 USD	Other MT	Level 3	87.48670998	87.2983	IDC	12/31/2018	IDC-Sam	38.0706	12/31/2018	6,087,251	18,563,113	881561XL3	100	12/31/2018	---				
62126	3138LHY32	FNAN5229	3,901,563 USD	FNMA	Level 2	96.52599987	99.3164	IDC	12/31/2018	IDC-Sam	100.425	12/31/2018	(66,904)	3,874,892	3138LHY32			---				

CA-3487821: Price Hierarchies Change review - Walkthrough Example

CA-3487821: Price Hierarchies Change review - Walkthrough Example

Price Hierarchy and Override Control Q1'19 - Microsoft Excel

C10136 fx P9242DKH5

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Paste in multisource	here, delete prices that are not 5/31, sort by identifier then by MarkIT price, descending	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	Account	Identifier	Description	Current Units	Curre nt	Security Type	Fair Value Level	Account Source	Market Price	AIG Price Source	Price From Source	Price Source	Markit Price	Markit Price Date	Price Override Source	Net Unrealized Value	Market Value	Broker Price	Broker Price Date	Client Price	Client Price Date
3																					
678	3119158	3119158	485013.88 USD	MORTGAGE	Level 3			102.405	Client	2/28/2019	Override			Client	6200.56	496678.46					
679	3119102	3119102	926667.04 USD	MORTGAGE	Level 3			102.52	Client	2/28/2019	Override			Client	13515.03	950019.02					
680	3117081	3117081	198148.58 USD	MORTGAGE	Level 3			101.467	Client	2/28/2019	Override			Client	3431.92	201055.43					
792	313602M24	FNR 8912 R	0 USD	FNMA CMO	Level 3			0 DEMINB	3/25/2019	Override				DEMINBV	-0.05	0					
10136	P9242DKH5	FORD CREDIT DE	32000000 MXN	CORP	Level 2			100.0361	VALMER	3/29/2019	Override			VALMER	2005.61	32011547.85					
17364	816413AD0	SELKIRK 2013-1	28761000 USD	Other MTGE	Level 2			101.397	CS	3/29/2019	Override	111.26	3/29/2019	CSFB --CW Internal	5932137.7	29162792.08	101.397	3/29/2019	101.397	3/29/2019	
17365	816413AA6	SELKIRK 2013-1	132027871 USD	Other MTGE	Level 2			105.5586	CS	3/29/2019	Override	105.78	3/29/2019	CSFB --CW Internal	2700136.7	139366773.8	105.5586	3/29/2019	105.5586	3/29/2019	
17366	816413AC2	SELKIRK 2013-1	27610000 USD	Other MTGE	Level 2			104.497	CS	3/29/2019	Override	107.80	3/29/2019	CSFB --CW Internal	3783421.9	28851622.16	104.497	3/29/2019	104.497	3/29/2019	
17367	816412AC4	SELKIRK 2014-3A	15147615 USD	Other MTGE	Level 2			109.5617	CS	3/29/2019	Override	108.01	3/29/2019	CSFB --CW Internal	1153459.5	16595984.34					
20022	81642DAF2	SELKIRK 2014-3V	1773771 USD	Other MTGE	Level 3			79.655	CS	3/29/2019	Override	71.03	3/29/2019	CSFB --CW Internal	169220.36	1412897.27					
21585	AN3877239	SAMSUNG CARD C	1E+10 KRW	CORP	Level 2			100.2265	BMBG	3/29/2019	Override	100.18	3/29/2019	BMBG -- CW Intern	22650146	10022650146					
21587	QZ4138157	SHINHAN CARD C	1E+10 KRW	CORP	Level 2			99.8546	BMBG	3/29/2019	Override	99.84	3/29/2019	BMBG -- CW Intern	-14540100	9985459900					
21588	AO1308961	SHINHAN BANK	1E+10 KRW	CORP	Level 2			99.978	BMBG	3/29/2019	Override	100.00	3/29/2019	BMBG -- CW Intern	-2200317.4	9997799683					
21591	QZ3568867	HANA CAPITAL CO	1E+10 KRW	CORP	Level 2			99.846	BMBG	3/29/2019	Override	99.59	3/29/2019	BMBG -- CW Intern	-15399933	9984600067					
21592	QZ1442297	HYUNDAI CARD C	1E+10 KRW	CORP	Level 2			99.8595	BMBG	3/29/2019	Override	99.90	3/29/2019	BMBG -- CW Intern	-14050293	9985949707					
21593	AN5746648	HS KOREA CARD C	1E+10 KRW	CORP	Level 2			100.1657	BMBG	3/29/2019	Override	100.2265	3/29/2019	BMBG -- CW Intern	16570282	10016570282					
21596	AM5643979	99.94 BMBG	3/29/2019	Override	99.87	3/29/2019		99.87	BMBG	3/29/2019	Override	99.84	3/29/2019	BMBG -- CW Intern	-5999755.9	9994000244					
21598	QZ0428826	99.0082 BMBG	3/29/2019	Override	98.84	3/29/2019		98.84	BMBG	3/29/2019	Override	99.0082	3/29/2019	BMBG -- CW Intern	-99179840	9900820160					
21600	AM2767854	99.9533 BMBG	3/29/2019	Override	99.87	3/29/2019		99.87	BMBG	3/29/2019	Override	99.9533	3/29/2019	BMBG -- CW Intern	-4669952.4	9995330048					

Price Hierarchy and Override Source P3

Price Override Source

	B	C	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Z	AA	AB	AC	AD	AE	AF
1	Paste in multisource	IT price, descending	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	25	26	27	28	29	
2	Account	Identifier	Market Price	AIG Price	Price From Source	Price Source	Markit Price	Markit Price Date	Price Override Source	Net Unrealized Value	Market Value	Broker Price	Broker Price Date	Client Price	Client Price Date	Asset Manager Price	Broker Description	Client Description	Asset Manager Description	SEC_ID_PRI	BVAL Price	BVAL Price Date	Pricing Category
3																							
678	3119158	102.405	Client	2/28/2019	Override			Client	6200.56	496678.46									3119158			---	
679	3119102	102.52	Client	2/28/2019	Override			Client	13515.03	950019.02									3119102			---	
680	3117081	101.467	Client	2/28/2019	Override			Client	3431.92	201055.43									3117081			---	
792	313602M24	0 DEMINB	3/25/2019	Override				DEMINBV	-0.05	0									313602M24			DBV	
10136	P9242DKH5	100.0361 VALMER	3/29/2019	Override				VALMER	2005.61	32011547.85									P9242DKH5			---	
17364	816413AD0	101.397	CS	3/29/2019	Override	111.26	3/29/2019	CSFB --CW Internal	5932137.7	29162792.08	101.397	3/29/2019	101.397	3/29/2019		CSFB	CSFB	816413AD0			SEC		
17365	816413AA6	105.5586	CS	3/29/2019	Override	105.78	3/29/2019	CSFB --CW Internal	2700136.7	139366773.8	105.5586	3/29/2019	105.5586	3/29/2019		CSFB	CSFB	816413AA6			SEC		
17366	816413AC2	104.497	CS	3/29/2019	Override	107.80	3/29/2019	CSFB --CW Internal	3783421.9	28851622.16	104.497	3/29/2019	104.497	3/29/2019		CSFB	CSFB	816413AC2			SEC		
17367	816412AC4	109.5617	CS	3/29/2019	Override	108.01	3/29/2019	CSFB --CW Internal	1153459.5	16595984.34									109.5617	3/29/2019		SEC	
20022	81642DAF2	79.655	CS	3/29/2019	Override	71.03	3/29/2019	CSFB --CW Internal	169220.36	1412897.27									79.655	3/29/2019		SEC	
21585	AN3877239	100.2265	BMBG	3/29/2019	Override	100.18	3/29/2019	BMBG -- CW Intern	22650146	10022650146									100.2265	3/29/2019		SEC	
21587	QZ4138157	99.8546	BMBG	3/29/2019	Override	99.84	3/29/2019	BMBG -- CW Intern	-14540100	9985459900									99.8546	3/29/2019		SEC	
21588	AO1308961	99.978	BMBG	3/29/2019	Override	100.00	3/29/2019	BMBG -- CW Intern	-2200317.4	9997799683									99.978	3/29/2019		SEC	
21591	QZ3568867	99.846	BMBG	3/29/2019	Override	99.59	3/29/2019	BMBG -- CW Intern	-15399933	9984600067									99.846	3/29/2019		SEC	
21592	QZ1442297	99.8595	BMBG	3/29/2019	Override	99.90	3/29/2019	BMBG -- CW Intern	-14050293	9985949707									99.8595	3/29/2019		SEC	
21593	AN5746648	100.1657	BMBG	3/29/2019	Override	99.92	3/29/2019	BMBG -- CW Intern	16570282	10016570282									100.1657	3/29/2019		SEC	
21596	AM5643979	99.94	BMBG	3/29/2019	Override	99.87	3/29/2019	BMBG -- CW Intern	-5999755.9	9994000244									99.94	3/29/2019		SEC	
21598	QZ0428826	99.0082	BMBG	3/29/2019	Override	98.84	3/29/2019	BMBG -- CW Intern	-99179840	9900820160									99.0082	3/29/2019		SEC	
21600	AM2767854	99.9533	BMBG	3/29/2019	Override	99.87	3/29/2019	BMBG -- CW Intern	-4669952.4	9995330048									99.9533	3/29/2019		SEC	

3.31 Multisource Scrubbed 12.31 Multisource Scrubbed

AIG

CA-3487821: Price Hierarchies Change review - Walkthrough Example

From: Mullin, Janine <Janine.Mullin@aig.com>

Sent: Wed 4/17/2019 10:17 AM

To: Chung, Albert

Cc:

Subject: FW: maintaining DEMINBV

Message AIG-10651 IVFA review.xlsx

Hello,

As discussed today, I have reviewed the list in the spreadsheet as requested. Please find attached with updated comments as well as below email confirmation of the change in hierarchy based on the feedback from Investment Accounting. Also, confirmed highlighted securities in list below also included in spreadsheet..

Regards,

Janine

From: Micah Neely [mailto:mneely@clearwateranalytics.com]

Sent: Wednesday, January 23, 2019 4:18 PM

To: Mullin, Janine; AIG_CWPricing; Joseph Zurenski

Cc: AIGGIG, Pricing; Khanal, Subhash

Subject: RE: maintaining DEMINBV

Thanks. This is the new hierarchy we will implement:

Pricing Category	Source 1	Source 2
DBV	Override	Client

Logic to cue this hierarchy is

For all securities ever priced with source DEMINBV

93933VA44, 93933VA81, 93933VA57, 93933WA08, 37934EAE2, 93933VBC1, 03306*AB1, 03306*AH8, 115027NN0, 853156206, 909286AC0, 93933VB80, 93933VB49, 909279AN1AIG, 049567100, 222581100, 313602M24, 12498FAG5AIG, Y6912H166, Y6912H240, Y6912H208, Y6912H232, Y6912H182, Y6912H315, Y6912H216, Y6912H224, 91336M204, 07386HTJ0, 16678RDW4, 29445FCX4, 152314PBO, 45660LLW7, 040104MP3, 542514KG8, 126673X23, 94982BAL4, 073879QH4, 16678YAC6, 80410RA82, 543136AB1, 02149RAF5, 00256VAC6, 00256VAB8, 501921209, 362359408, 045412103, 417901105, 449149103, 92580Q206, 056991870, 927993113, 00009AMR6, 07003@118, 38655V2#5, 38655V208, 38655V307, 38881#118, 4099989A1, 4099999A9, 4500019A2, 45890A2#1, 46117#117, 46117#125, 5561412*9, 55917Q2*8, 6412519*7, 68277@127, 68277@135, 693743957, 853156909, 89156#127, 999PM2SN7, 999PM8552, 31399Y8Y8, 896047D#1, 656568508, 75627*105, 001998106, 356990103, 525ESC318, 57060D991, Y71175155, 619990906, 68371@105, 999PP7S13, 68389D#5, 07003@100, 87185@102, 363998108, 628997108AIG, 628997207AIG, 628997306AIG, 967617440, 00432V984, 454088980, 486MMI7A3AIG, 64123P2#8, 64123P3#7, 64123P4#6, 87126*AB2, 924997109, 46299M997, 587268996, 91199A966, 999PM8551, 999PM2S26, 893993451, 042992404, 001991645, 21299ADNOAIG, 64123P5#5, 449991199AIG, 874991102AIG, 417990751, 449991207AIG, 594991382AIG, 64123P6#4, 594991374AIG, 754991115, 300993631AIG, DM0012524, DM0013528, DM0012526, DM0010522, DM0006516, 999PP8532, 999PP8533, DM0671345, 667294AU6AIG, 25501G113, 25501G121, 896047D#1:AIG, 01853@971, 63580R106, 49567100, 909279AN1, 486MMI7A3, 45412103, 56991870, 525ESC3F4AIG

OR

(Identifier contains (525ESC OR 524ESC) AND description contains (Lehman))

525178AA3AIG is NOT flagged DBV by this logic.

CA-3487821: Price Hierarchies Change review - Walkthrough Example

From: Micah Neely [<mailto:mneely@clearwateranalytics.com>]
Sent: Thursday, April 11, 2019 2:46 PM
To: Chung, Albert <Albert.Chung@aig.com>; Mullin, Janine <Janine.Mullin@aig.com>
Cc: AIG_CWPricing <AIG_CWPricing@clearwateranalytics.com>; AIGGIG, Pricing <AigPricing@aig.com>
Subject: [EXTERNAL] RE: 3.31.19 Review - Overrides & Securities with Hierarchy Changes

Caution: External Email

Albert,
A large number of the overrides are going to be set approved by Janine late on close day for the LSTREET securities.

We'll have the complete response for the CW portions by 4/18/2019.

CW ref AIG-10651

Cheers,
Micah Neely | Sr. Client Services Analyst
Direct: 208 489 1308 | Team: 208 810 2359

From: Chung, Albert <Albert.Chung@aig.com>
Sent: Thursday, April 11, 2019 12:17 PM
To: Micah Neely <mneely@clearwateranalytics.com>; Mullin, Janine <Janine.Mullin@aig.com>
Cc: AIG_CWPricing <AIG_CWPricing@clearwateranalytics.com>; AIGGIG, Pricing <AigPricing@aig.com>
Subject: 3.31.19 Review - Overrides & Securities with Hierarchy Changes

CAUTION: External Email

Micah / Janine,

As part of the quarterly review of overrides and hierarchy changes, attached is a list of questions split into 3 tabs with brief description below. The first 2 tabs related to security changes within security specific hierarchies and newly implemented DBV hierarchy and the 3rd tab represents overrides for 3/31.

DBV – Janine to Confirm

- 31 securities where the source was not previously set to DEMINBV for 12/31 but newly implemented DBV hierarchy applied for 3/31 – just need Janine's confirmation that setting these 31 to DBV is appropriate
 - Noted that the first 4 securities have At-Cost and BMBG as the books and records source for 3/31 despite them being in DBV hierarchy (separate inquiry on why: #30 – 33 in tab, Security Spec Hierarchy Changes)

Security Spec Hierarchy Changes (Micah/CW)

- 34 securities in total of which 20 should be easy to confirm / the remainder 14 may require some time to review – see column H
 - For reference, I have excluded 6 securities from this list since I have what I need (was cc'd on the emails) – this list represents the remainder which I do not have support

Overrides Review (Micah/CW)

- 142 overrides in total of which approximately half are likely easy confirmations / carry forward of prior quarter's comments, and another 17 securities are likely a simple explanation (why override was required for securities set to DEMINBV)
 - The remainder may require time to review – see column M

Please let me know if you have any questions – thank you all in advance.

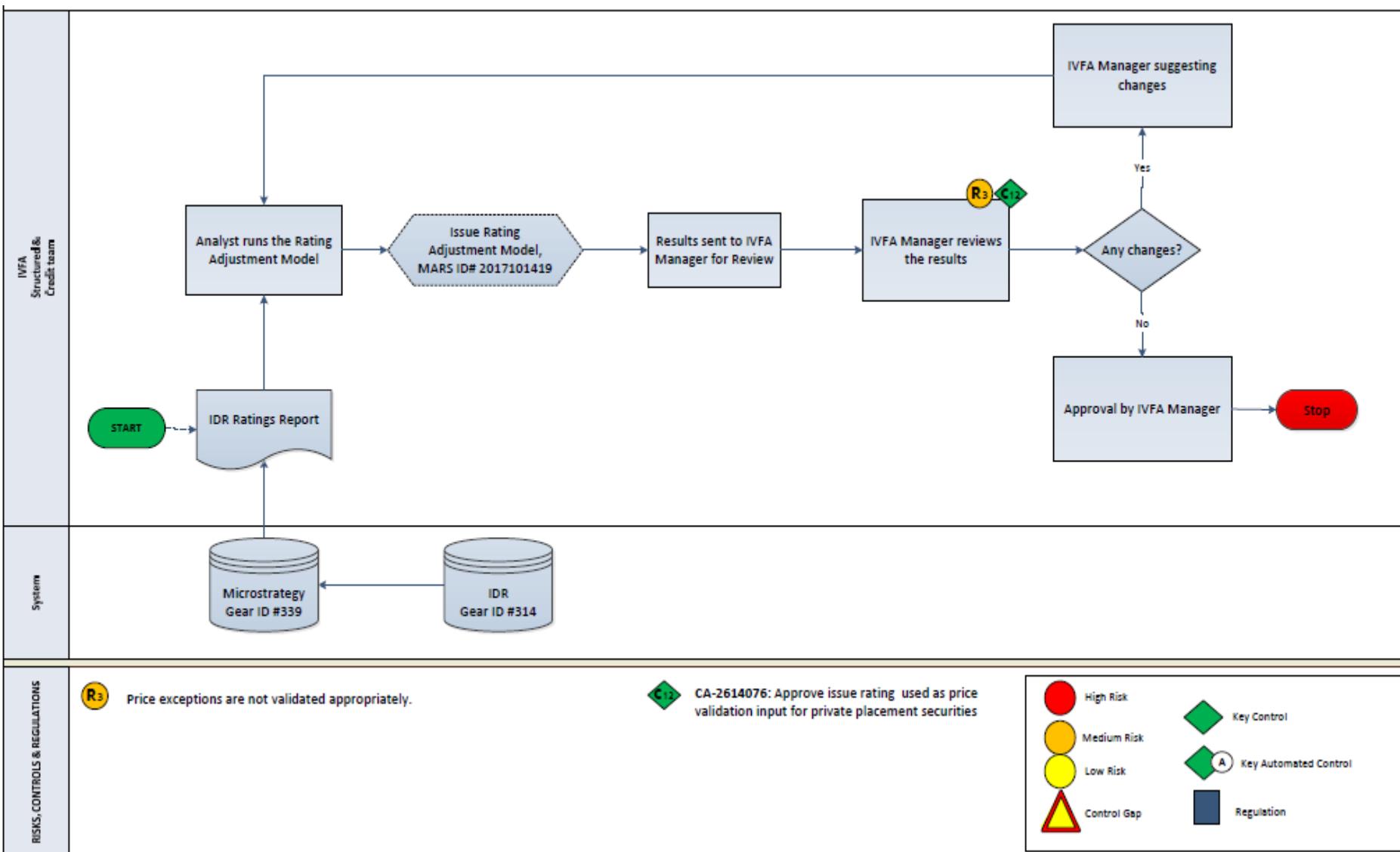
Rating Adjustments Review

New Control (Risk – Medium, Frequency –Annually)	
Description	Additional Description
Annually, an IVFA analyst uses Rating Adjustment Model (excel based model) to calculate adjustments to the AIG Obligor Risk Rating (ORR) issuer rating to obtain a specific issue rating. The model output, in an excel format, is reviewed and approved by an IVFA supervisor. The file with approved issue ratings is password protected and used in price validation input for private placement securities.	

On May 08 2019, Bella Jiang has verified that this control description is accurate for 2019.



Rating Adjustments Review Process Flowchart



CA-2614076: Rating Adjustment Model - Walkthrough Example

Aug.30, 2018

IVFA Issue Rating Adjustments

Issuer rating	Issuer rating group	Issue rating adjustments		
		Secured	Senior	Subordinated
Aaa	AAA	-1	0	-2
Aa1	AA	0	0	-2
Aa2	AA	1	0	-2
Aa3	AA	1	0	-2
A1	A	1	0	-2
A2	A	1	0	-2
A3	A	1	0	-2
Baa1	BBB	2	0	-1
Baa2	BBB	2	0	-1
Baa3	BBB	2	0	-1
Ba1	BB	1	0	-2
Ba2	BB	1	0	-2
Ba3	BB	1	0	-2
B1	B	1	0	-1
B2	B	1	0	-1
B3	B	1	0	-1

Notes

- 1 Analysis is based on all corporate bonds that are held by AIG on Sep.30, 2017. Number of bonds: 8,797.
- 2 Number of bonds with Seniority Category of Secured is 1,095, Senior - 7,195, Subordinated - 399. Total: 8,689
- 3 Number of bonds with ORR issuer rating: 8,211.
- 4 Number of bonds with ORR issuer rating + external rating + consensus issue rating available: 4,781.
- 5 Number of bonds with an ORR issuer rating between Aaa and B3 and some consensus issue rating: 4,602.

Adjusted Issue Rating

Issuer rating	ORR rating	Issue rating		
		Secured	Senior	Subordinated
Aaa	AAA	A3	Aaa	Aa2
Aa1	AA	A4	Aaa	Aa3
Aa2	AA	A2	Aa1	Aa3
Aa3	AA	A2	Aa2	A2
A1	A	A4	Aa3	A1
A2	A	A3	A1	A2
A3	A	A3	A2	A3
Baa1	BBB	A4	A2	Baa1
Baa2	BBB	A4	A3	Baa2
Baa3	BBB	A4	Baa3	Baa3
Ba1	BB	A5	Baa3	Ba1
Ba2	BB	B1	Ba2	B1
Ba3	BB	B1	Ba2	B2
B1	B	B4	Ba3	B1
B2	B	B6	B1	B2
B3	B	B6	B2	B3
				Caa1

Number of Securities

Issuer rating	Number of Securities		
	Secured	Senior	Subordinated
Aaa	7	62	2
Aa1	6	61	5
Aa2	11	87	9
Aa3	12	284	26
A1	22	523	87
A2	89	771	38
A3	234	801	57
Baa1	105	1,234	47
Baa2	102	1,078	26
Baa3	73	690	2
Ba1	18	193	-
Ba2	22	131	7
Ba3	27	139	2
B1	20	45	3
B2	24	78	-
B3	11	15	-
Total	783	6,192	311

Morningstar Issue Rating Adjustments

Issuer Rating	Senior Secured	Senior Unsecured	Unsecured	Subordinated	
				No notching	No notching
AAA	7	62	2		
AA	29	432	40		
A	345	2095	182		
BBB	280	3002	75		
BB	67	463	9		
B	55	138	3		
CCC-C	0	0	0	0 to -3	0 to -3

Final Ratings Adjustment with "0" overrides on the top left section

IVFA Issue Rating Adjustments Aug.30, 2018

Issuer rating	Issue rating adjustments		
	Secured	Senior	Subordinated
Aaa	0	0	-2
Aa1	0	0	-2
Aa2	0	0	-2
Aa3	0	0	-2
A1	0	0	-2
A2	0	0	-2
A3	0	0	-2
Baa1	0	0	-1
Baa2	0	0	-1
Baa3	0	0	-1
Ba1	1	0	-1
Ba2	1	0	-1
Ba3	1	0	-1
B1	1	0	-1
B2	1	0	-1
B3	1	0	-1

Positive = Upgrade Negative = Downgrade

NOTE: Manual override from -2 to -1. The change (-1 in 2017 to -2 in 2018) was due to insufficient data. As a result, IVFA is not making any changes to the Rating Adjustment Model.

Number of Securities

Issuer rating	Number of Securities		
	Secured	Senior	Subordinated
Aaa	7	62	2
Aa1	6	61	5
Aa2	11	87	9
Aa3	12	284	26
A1	22	523	87
A2	89	771	38
A3	234	801	57
Baa1	105	1,234	47
Baa2	102	1,078	26
Baa3	73	690	2
Ba1	18	193	-
Ba2	22	131	7
Ba3	27	139	2
B1	20	45	3
B2	24	78	-
B3	11	15	-
Total	783	6,192	311

CA-2614076: Rating Adjustment Model - Walkthrough Example

From: Jiang, Bella
Sent: Tuesday, October 09, 2018 3:25 PM
To: Isakov, Alexander; Chudy, Jeff
Subject: RE: Rating Adjustment Model Update

Thanks Jeff and Alex.

Results are reviewed and Approved.

Thanks,
Bella

From: Isakov, Alexander
Sent: 2018/10/09 15:23
To: Chudy, Jeff <Jeff.Chudy@aig.com>
Cc: Jiang, Bella <Bella.Jiang@AIG.com>
Subject: RE: Rating Adjustment Model Update

Jeff,
Thank you for the new rating model.
I just checked results and calculations.
No issues – correct calculations and final table conversion.

Bella,
Please approve.

Thank you,
Alexander Isakov

From: Chudy, Jeff
Sent: Thursday, September 27, 2018 2:10 PM
To: Isakov, Alexander
Cc: Jiang, Bella
Subject: Rating Adjustment Model Update

Alex,

Please review the update to the Rating Adjustment Model located here:
<\\Global\Securities Pricing\Formal Process\201809\Rating Adjustment Model Update>

Thanks
Jeff

CA-2614076: Rating Adjustment Model - Walkthrough Example

	Issue rating						
IVFA_coeff	Issuer rating	ORR rating	Secured	Senior	Subordinated	IVFA_coeff	Issuer rating
1	Aaa	1	Aaa	Aaa	Aa2	1	Aaa
2	Aa1	2+	Aa1	Aa1	Aa3	2	Aa1
3	Aa2	2	Aa2	Aa2	A1	3	Aa2
4	Aa3	2-	Aa3	Aa3	A2	4	Aa3
5	A1	3+	A1	A1	A3	5	A1
6	A2	3	A2	A2	Baa1	6	A2
7	A3	3-	A3	A3	Baa2	7	A3
8	Baa1	4+	Baa1	Baa1	Baa2	8	Baa1
9	Baa2	4	Baa2	Baa2	Baa3	9	Baa2
10	Baa3	4-	Baa3	Baa3	Ba1	10	Baa3
11	Ba1	5+	Baa3	Ba1	Ba2	11	Ba1
12	Ba2	5	Ba1	Ba2	Ba3	12	Ba2
13	Ba3	5-	Ba2	Ba3	B1	13	Ba3
14	B1	6+	Ba3	B1	B2	14	B1
15	B2	6	B1	B2	B3	15	B2
16	B3	6-	B2	B3	Caa1	16	B3
17	Caa1	7+	Caa1	Caa1	Caa1	17	Not Applicable
18	Caa2	7	Caa2	Caa2	Caa2	18	Caa2
19	Caa3	7-	Caa3	Caa3	Caa3	19	Not Applicable
20	Ca	8	Ca	Ca	Ca	20	Ca
21	C	9	C	C	C	21	C
22	D	10	D	D	D	22	D

Issue rating adjustments			
Issuer rating	Secured	Senior	Subordinated
Aaa	0	0	-2
Aa1	0	0	-2
Aa2	0	0	-2
Aa3	0	0	-2
A1	0	0	-2
A2	0	0	-2
A3	0	0	-2
Baa1	0	0	-1
Baa2	0	0	-1
Baa3	0	0	-1
Ba1	1	0	-1
Ba2	1	0	-1
Ba3	1	0	-1
B1	1	0	-1
B2	1	0	-1
B3	1	0	-1

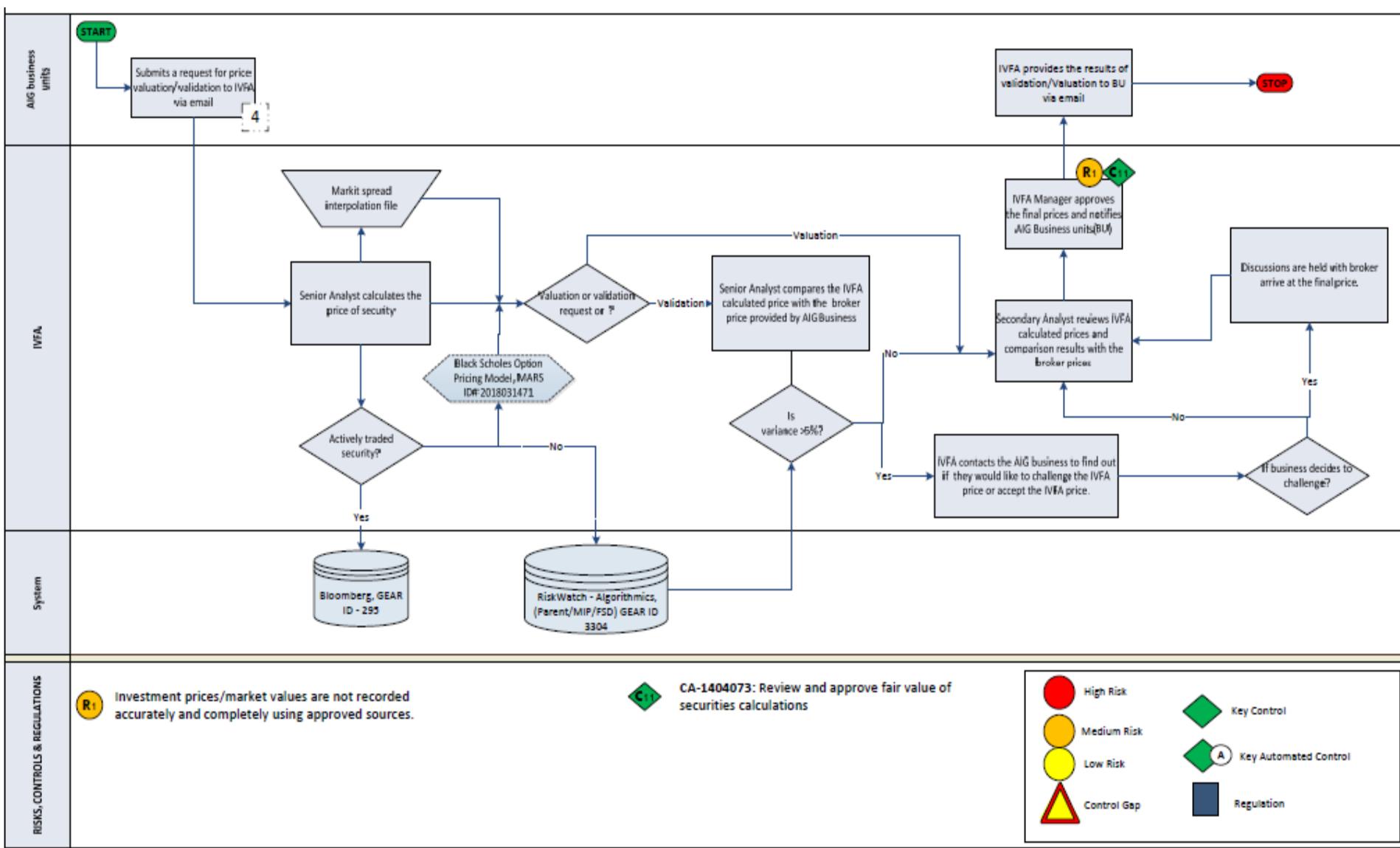
Debt Price Validation/Valuation

Control CA-1404073 (Risk – Medium, Frequency –Quarterly)	
Description	Additional Description
Quarterly, Independent Valuation and Financial Analytics (IVFA) personnel calculates prices using RiskWatch Model/Black Scholes Option Pricing Model /Bloomberg based on valuation and validation requests received from AIG businesses via email. The analysis is signed off by the valuator and forwarded to the manager for review and approval through email.	

On May 08 2019, Bella Jiang has verified that this control description is accurate for 2019.



Debt Price Verification Process Flowchart



CA-1404073: Quarterly Valuation Requests - Walkthrough Example

From: Kwon, Ken
To: Jiang, Bella
Cc:
Subject: IVFA Debt Pricing request @3.31.18
Message 1Q Debt pricing request_IVFA.XLSX

Hi, Bella,

Please accept excel file as our pricing request @3.31.19.

We have 3 validation and 2 valuation requests.

If you have any question, please let me know.

Thanks,

Ken Kwon
Corporate Accounting And Reporting | AIG Corporate
80 Pine St., 2nd Flr, New York, NY 10005
Tel +1 212 770 4850 | Cell +1 347 880 6911
Ken.kwon@aig.com

1Q Debt pricing request_IVFA (2) [Read-Only] - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K
1	Validation				Rate	Issue	Maturity	IDC or BMBG (@3.31.19)		Valuation Date	Delivery Request Date
2	FX#2	JPY	4,500,000,000	XS0270182461	2.5000	10/13/06	10/13/26	110.25	Validation request	3/31/2019	4/5/2019
3	TN#7	EUR	14,937,263	XS0337130453	5.1450	12/19/07	12/19/22	114.91	Validation request	3/31/2019	4/5/2019
5	AIGFP-02,03	USD	300,000	02687QBG2	Float	12/5/06	12/5/46	98.47	Validation request	3/31/2019	4/5/2019
10											
11	Valuation										
12											
13	TN#24	USD	400,000,000	XS1684198648	Zero cpn	11/22/17	11/22/47		Valuation request	3/31/2019	4/5/2019
14											
15	Preferred stock	USD	500,000,000	US0268747500	5.8500	3/14/19	Perpetual, redeemable after		Valuation request	3/31/2019	4/5/2019

CA-1404073: Quarterly Valuation Requests - Walkthrough Example

Algoritmics RiskWatch-4.6.1-0885-rhel-x86_64-5.2-gcc-4.3.3 - ANLT0023-rw.base 2019/03/29 - [Instruments Module]

File Edit View Options Instrument Window Help

Interest Rate Index Linked Note

5.88 % QURT 30/360

1	
Name	XS0270182461
Type	Interest Rate Index Linked ...
THEO/Price	107.4009 JPY
THEO/Accrued Interest	1.1528 JPY
Spread Over Yield	1.4320 % QURT actual/360
Maturity Date	2026/10/13
Coupon Rate	2.5000 % ANNU 30/360
Spread	0.0000 % QURT 30/360
Notional	100.0000 JPY
Call Schedule	

RiskWatch_And_Spread InterpolationUSD_JPY_EUR_2019Q1 [Read-Only] - Microsoft Excel

B3		fx 3/29/2019																			
A	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Date	Ticker	ShortName	Tier	Ccy	DocClause	Contributor	Spread6m	Spread1y	Spread2y	Spread3y	Spread4y	Spread5y	Spread7y	Spread10y	Spread15y	Spread20y	Spread30y	Recovery		
2	29-Mar-19	AIG	AmerIntlGpInc	SNRFOR	JPY	MR14	Composite	0.001126	0.00176	0.00356	0.00552	0.00794	0.01077	0.01402	0.01569	0.016364	0.017259	0.018892	0.4 AAA	AAA	
3																					
4																					
5																					
6																					
7	Deal #	Maturity	Spread as of Valuation Date																		
8	XS0309298296	4/24/2018	0.1126	0.113 % quart actual/360																	
9	XS0309312113	8/23/2018	0.1126	0.113 % quart actual/360																	
10	XS0270182461	13-Oct-26	1.4319	1.432 % quart actual/360																	

RiskWatch_And_Spread InterpolationUSD_JPY_EUR_2019Q1 [Read-Only] - Microsoft Excel

A2		fx#2																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	Reviewer					
1	Validation																		
2	FX#2	JPY	4500000000	XS0270182461	2.5	10/13/2006	10/13/2026	110.25	Validation request	3/31/2019	4/5/2019	107.4009 JPY	-2.58422	Chelsea					
3	TN#7	EUR	14937263	XS0337130453	5.145	12/19/2007	12/19/2022	114.91	Validation request	3/31/2019	4/5/2019	116.5086 EUR	1.391176	Chelsea					
4	AIGFP-02,03	USD	300000	02687QBG2	Float	12/5/2006	12/5/2046	98.47	Validation request	3/31/2019	4/5/2019	97.3582 USD	-1.12907	Chelsea					
5																			
6	Validation																		
7																			
8	TN#24	USD	4000000000	XS1684198648	Zero cpn	11/22/2017	11/22/2047		Valuation request	3/31/2019	4/5/2019	84.9133 USD		Chelsea					
9																			
10	Preferred stock	USD	5000000000	US0268747500	5.85	3/14/2019	Perpetual, redeemabl		Valuation request	3/31/2019	4/5/2019	24.1287 USD		Chelsea					
11																			

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

From: Jiang, Bella
To: Kwon, Ken
Cc: Isakov, Alexander; Yang, Chelsea (Qianqian)
Subject: FW: IVFA Debt Pricing request @3.31.18

Sent: Thu 4/4/2019 5:01 PM

[Message](#) [FINAL AIG Pref term sheet.pdf](#)

[RiskWatch_And_Spread InterpolationUSD_JPY_EUR_2019Q1.xlsm](#)

Thanks Alex and Chelsea. The pricings have been approved.

Ken, please see the attached file.

Thanks,
Bella

From: Yang, Chelsea (Qianqian)
To: Jiang, Bella
Cc: Isakov, Alexander
Subject: FW: IVFA Debt Pricing request @3.31.18

Sent: Thu 4/4/2019 4:49 PM

[Message](#) [FINAL AIG Pref term sheet.pdf](#)

[RiskWatch_And_Spread InterpolationUSD_JPY_EUR_2019Q1.xlsm](#)

Hi Bella,

I have reviewed Alex's pricing.

Best,
Chelsea

From: Isakov, Alexander
Sent: Thursday, April 04, 2019 4:13 PM
To: Jiang, Bella; Yang, Chelsea (Qianqian)
Subject: FW: IVFA Debt Pricing request @3.31.18

Chelsea,
Attached please find a final version of our calculations (5 securities)

Thank you,
Alexander Isakov

From: Jiang, Bella
Sent: Wednesday, April 03, 2019 6:11 PM
To: Isakov, Alexander; Yang, Chelsea (Qianqian)
Cc: Kwon, Ken
Subject: Fwd: IVFA Debt Pricing request @3.31.18

[Next](#) [Previous](#)

Ken,

I've received your request.

Alex,

Please price the attached deals and send your pricing to Chelsea for review after it's done.

Thanks,
Bella

CA-1404073: Quarterly Valuation Requests- Stock Option - Walkthrough Example

From: Jiang, Bella
To: Wong, Leslie
Cc: Chudy, Jeff; Yang, Chelsea (Qianqian)
Subject: FW: 3-18-19 Option

Sent: Tue 3/19/2019 12:48 PM

Message 3-18-19 Option.zip

AIG Option Pricing Model 3-18-19 v1.1_Validate.xlsx

Thanks Jeff and Chelsea. The valuation has been approved.

Leslie, Please see attached IVFA stock option valuation as of 2019/03/18. (memo is in the first attachment.)

Thanks,
Bella

From: Yang, Chelsea (Qianqian)
Sent: Tuesday, March 19, 2019 12:28 PM
To: Jiang, Bella; Chudy, Jeff
Subject: RE: 3-18-19 Option

Bella/Jeff,

I have reviewed the option pricing.

Best,
Chelsea

From: Chudy, Jeff
Sent: Tuesday, March 19, 2019 11:54 AM
To: Jiang, Bella; Yang, Chelsea (Qianqian)
Subject: 3-18-19 Option

Chelsea,

Please see the attached 3-18-19 for your review.

Thanks

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

AIG Option Pricing Model 3-18-19 v1.1 [Protected View] -

File Home Insert Page Layout Formulas Data Review View Acrobat

i Protected View This file originated from an Internet location and might be unsafe. Click for more details. **Enable Editing**

I5 f_x =C14

	A	B	C	D	E	F	G	H	I	J	K	
1	European Vanilla Call Option Valuation											
2	European Option: Constant Yield, Continuous Dividend Model											
3	Manual Inputs											
4	#	Inputs	Field									Input Summary
5	1	3/18/2019	Valuation Date									S: stock price 44.28
6												K: strike price 44.28
7	Do Not Change											r: risk-free rate 2.5112%
8	2	3/18/2019	Grant Date									σ: annualized volatility 23.1514%
9	3	3/18/2029	Expiration Date (+10 yrs)									T: years to expiration 6.396
10	4	8/9/2025	Expiration Date (Midpoint)									q: Dividend Yield 2.8907%
11	4	1/1/2022	Vesting Date (fixed for all 2019)									
12												d ₁ = 0.2513
13	Formulas - Do not change											N(d ₁) = 0.5992
14	4	44.280	AIG Stock Price									d ₂ = -0.3342
15	5	44.280	Strike (at the money)									N(d ₂) = 0.3691
16	6	20190318	BB Format Date									
17	7	AIG US Equity	BB Ticker - AIG									
18	8	10	Time to Expiry (Years)									Call Option Value \$8.14
19	9	2.793	Time to Vesting (Years)									
20	10	6.396	Time to Expiry (Midpoint Yrs)									
21	10	76.8	Time to Expiry (Midpoint Months)									
22	10	2336	Time to Expiry (Midpoint Days)									
23	11	USD	Currency									
24	12	24	Implied Vol Term (months)									
25	13	100.0%	Strike % Moneyness									
26	14	23.15%	Implied Vol									
27	15	2.891%	Dividend									
28	16	2.511%	Risk Free Rate									

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

AIG Option Pricing Model 3-18-19 v1.1 [Protected View] - Microsoft Excel																		
File Home Insert Page Layout Formulas Data Review View Acrobat																		
Protected View This file originated from an Internet location and might be unsafe. Click for more details. Enable Editing																		
F23	$f_x = \$B23\&\$D\$30&"_&TEXT(F\$22,"0.0%")\&\$D\31																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1																		
2	24	Implied Vol Term (months)																
3	100.00%	Moneyness% Bucket																
4	6	Moneyness% Bucket Index Location																
5	23.151	Volatility																
6	20190318	Valuation Date																
7																		
8																		
9	Volatility Surface [MID] - Verify on OVDV Bloomberg Screen (select LIVE Bloomberg Mid)																	
10		Moneyness																
11	AIG US Equity	80.0%	90.0%	95.0%	97.5%	100.0%	102.5%	105.0%	110.0%	120.0%								
12	3 Months	30.14	25.02	23.15	22.37	21.48	20.75	20.29	19.71	19.75								
13	6 Months	29.07	25.96	24.57	23.87	23.47	22.85	22.34	21.67	21.22								
14	12 Months	27.71	25.21	24.46	24.10	23.74	23.40	23.08	22.44	21.51								
15	18 Months	26.79	24.24	23.74	23.52	23.31	23.09	22.87	22.44	21.55								
16	24 Months	26.46	23.88	23.48	23.32	23.15	22.98	22.80	22.44	21.56								
17																		
18																		
19																		
20	Bloomberg Field Construction																	
21	Months	80.0%	90.0%	95.0%	97.5%	100.0%	102.5%	105.0%	110.0%	120.0%								
22	3	3MTH_I	3MTH_II	3MTH_I	3MTH_IMP	3MTH_IMP VOL	3MTH_IMP VOL	3MTH_I	3MTH_II	3MTH_I								
23	6	6MTH_I	6MTH_II	6MTH_I	6MTH_IMP	6MTH_IMP VOL	6MTH_IMP VOL	6MTH_I	6MTH_II	6MTH_I								
24	12	12MTH_I	12MTH_II	12MTH_I	12MTH_IMP	12MTH_IMP VOL	12MTH_IMP VOL	12MTH_I	12MTH_II	12MTH_I								
25	18	18MTH_I	18MTH_II	18MTH_I	18MTH_IMP	18MTH_IMP VOL	18MTH_IMP VOL	18MTH_I	18MTH_II	18MTH_I								
26	24	24MTH_I	24MTH_II	24MTH_I	24MTH_IMP	24MTH_IMP VOL	24MTH_IMP VOL	24MTH_I	24MTH_II	24MTH_I								
27																		
28	DO NOT DELETE - Text used in Bloomberg field construction																	
29		MTH_IMP VOL																
30		MNY_DF																
31																		
32																		
33																		
34																		
35	Main	Vol	Dividends	Risk-free														

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

AIG Option Pricing Model 3-18-19 v1.1 [Protected View]

File Home Insert Page Layout Formulas Data Review View Acrobat

Protected View This file originated from an Internet location and might be unsafe. Click for more details. **Enable Editing**

B4 f_x =+(B3*4)/Main!C14

	A	B	C	D	E	F	G	H	I
1									
2		Dividends							
3		0.32	BDVD_PROJ_DIV_AMT	Quarterly Dividend Projection Amount					
4		2.891%	Dividend Yield						
5									
6									
7									
8	Import all Dividend Projections to calc own yield?								
9	Projected Declared	Ex-Date	Amount	P	Trend	Option Impli	Option Implied	Range	High
10	5/1/2019	6/13/2019	0.32	0.3056	0.2227	0.2227	0.2227	0.332	0.332
11	8/1/2019	9/13/2019	0.32	0.3056	0.3121	0.3121	0.3121	0.3268	0.3268
12	10/25/2019	12/9/2019	0.32	0.3056	0.2103	0.2103	0.2103	0.2886	0.2886
13	2/12/2020	3/12/2020	0.32	0.2918	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
14	5/6/2020	6/11/2020	0.32	0.2918	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
15	8/5/2020	9/14/2020	0.32	0.2918	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
16	10/23/2020	12/8/2020	0.32	0.2918	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
17	2/10/2021	3/12/2021	0.34	0.2961	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
18	5/5/2021	6/11/2021	0.34	0.2961	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
19	8/4/2021	9/14/2021	0.34	0.2961	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
20	10/22/2021	12/7/2021	0.34	0.2961	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
21	2/9/2022	3/14/2022	0.36	0.2993	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
22	5/4/2022	6/13/2022	0.36	0.2993	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
23	8/3/2022	9/14/2022	0.36	0.2993	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
24	10/21/2022	12/13/2022	0.36	0.2993	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
25	2/8/2023	3/14/2023	0.38	0.3017	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A	#N/A N/A
26									
27									
28									

◀ ▶ ⏪ ⏩ Main Vol **Dividends** Risk-free

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

AIG Option Pricing Model 3-18-19 v1.1 [Protected View] - Microsoft Excel

Protected View This file originated from an Internet location and might be unsafe. Click for more details. [Enable Editing](#)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Interpolated Zero Rate												
2	USD.3M:BLOOMBERG 616430												
3	Term	Maturity	Market.Mid	Zc.Mid	Df.Mid								
4	3 MO	6/18/2019	2.61463	2.61463	0.993363	6/19/2019							
5	1F	6/19/2019	2.61249	2.67915	0.993295	9/18/2019							
6	2F	9/18/2019	2.60453	2.67563	0.986798	12/18/2019							
7	3F	12/18/2019	2.58877	2.65912	0.980383	3/18/2020							
8	4F	3/18/2020	2.59772	2.65314	0.973987	6/17/2020							
9	5F	6/17/2020	2.52139	2.63992	0.967819	9/16/2020							
10	6F	9/16/2020	2.46978	2.62228	0.961814	3/18/2021							
11	2 YR	3/18/2021	2.57520	2.57391	0.950136	3/18/2022							
12	3 YR	3/18/2022	2.51540	2.51294	0.927819	3/20/2023							
13	4 YR	3/20/2023	2.49234	2.48956	0.905647	3/18/2024							
14	5 YR	3/18/2024	2.49644	2.49442	0.883424	3/18/2025							
15	6 YR	3/18/2025	2.51810	2.51781	0.860600	3/18/2026							
16	7 YR	3/18/2026	2.54474	2.54662	0.837664	3/18/2027							
17	8 YR	3/18/2027	2.57630	2.58098	0.814519	3/20/2028							
18	9 YR	3/20/2028	2.61003	2.61801	0.791174	3/19/2029							
19	10 YR	3/19/2029	2.64325	2.65484	0.768119	3/18/2030							
20	11 YR	3/18/2030	2.67432	2.68956	0.745366	3/18/2031							
21	12 YR	3/18/2031	2.70340	2.72235	0.722904	3/20/2034							
22	15 YR	3/20/2034	2.76149	2.78803	0.660030	3/18/2039							
23	20 YR	3/18/2039	2.80770	2.83958	0.568973	3/18/2044							
24	25 YR	3/18/2044	2.82010	2.84997	0.492893	3/18/2049							
25	30 YR	3/18/2049	2.82350	2.84984	0.427878	3/18/2059							
26	40 YR	3/18/2059	2.80100	2.80582	0.328070	3/18/2069							
27	50 YR	3/18/2069	2.76800	2.74238	0.256180	1/0/1900							
28													
29													
30													
31													
32													
33													
34													

Main Vol Dividends Risk-free

CA-1404073: Quarterly Valuation Requests – Stock Option - Walkthrough Example

From: Jiang, Bella
To: Chudy, Jeff
Cc:
Subject: FW: Black-Scholes valuation required

Sent: Mon 3/12/2018 1:10 PM

From: Eng, Peter H
Sent: 2018/03/12 13:09
To: Jiang, Bella <Bella.Jiang@aig.com>; Suprun, Denis <Denis.Suprun@aig.com>
Cc: Brown, Sara G <Sara.Brown@aig.com>; Zalawadia, Meghna <Meghna.Zalawadia@aig.com>; Reid, Roshell <Roshell.Reid@aig.com>
Subject: Black-Scholes valuation required

Bella / Denis,

We will be granting plain-vanilla stock options to certain LTI participants tomorrow, March 13. Because these options are only time-based and not performance-based, we can value them using Black-Scholes.

Following tomorrow's close, can you calculate the Black-Scholes value of the stock options based on the March 13 closing stock price?

Stock Price: March 13 closing stock price
Exercise Price: March 13 closing stock price
Expected Life: 6.5 years, which is the mid-point between vesting (3 years) and option expiration (10 years)
Expected Volatility: Current implied volatility of AIG's publicly traded options (unless you use historical volatility based on AIG's share price)
Dividend yield: Current yield based on AIG's quarterly dividend rate of \$0.32
Risk-Free Rate: Current rate based on expected life of 6.5 years

Does that make sense?

Please let us know.

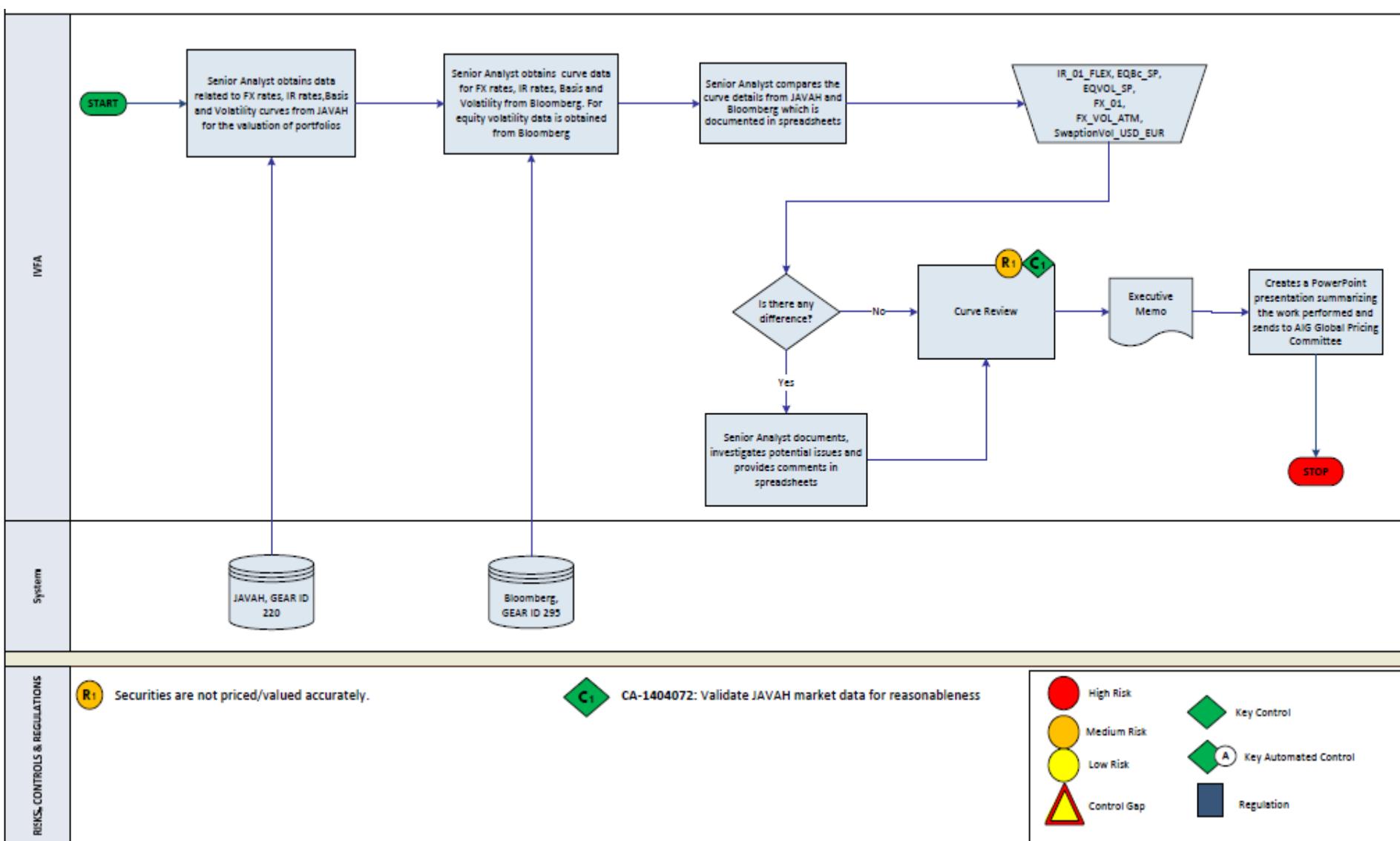
Derivatives Market Data (Curve Validation) Verification

Control CA-1404072 (Risk – Medium, Frequency –Monthly)	
Description	Additional Description
Monthly, an Independent Valuation and Financial Analytics (IVFA) Analyst reconciles current market data from JAVAH to curves from the Bloomberg terminal to validate the relevance of market data utilized to value the AIG derivative portfolio. Differences are documented, investigated and resolved. The reconciliation is signed off by the preparer and approved by the IVFA Manager via email. The summary is also included in the Global Pricing Review Committee (GPRC) package.	

On May 08 2019, Eugene Litvin has verified that this control description is accurate for 2019.



Derivatives Market Data Verification Process Flowchart



CA-1404072: Derivatives Market Data Verification - Walkthrough Example

From: Litvin, Eugene
 To: Timperman, Jeffrey
 Cc:
 Subject: RE: Javah curve validation - Q1 '19

Sent: Thu 5/2/2019 4:00 PM

Reviewed and approved.

Currency	Interest Rate			FX		Volatility			Basis			Credit			
	IR Diff (bp)	IR01	P&L	FX Diff (%)	FX01	P&L	Vol Diff (bp/%)	Vega	P&L	CCB/ICB Diff (bp)	CCB/ICB 01	P&L	CS Diff (bp)	CS01	P&L
USD	(0.5)	(18.5)	7.6				0.3	65.5	1.7		1.7	0.1	(1.0)	0.3	(0.3)
EUR	(0.0)	1.7	0.0	0.0	(46.1)	(0.8)	3.8	0.3	0.1	(4.2)	0.0	(0.1)			
GBP	(0.4)	3.2	(0.2)	0.2	(87.2)	(20.8)				(24.5)	(0.2)	(0.0)			
JPY	(0.1)	0.1	0.0	0.0	14.9	0.1				(18.5)	(0.0)	0.0			
AUD	(1.0)	0.0	(0.0)	(0.0)	(2.3)	0.0									
CAD	(1.1)	0.3	(0.3)	0.0	(5.8)	(0.2)					0.3	0.0			
CHF	0.0	0.0	0.0	0.1	(0.0)	(0.0)									
Other CCYs*	0.0	0.1	(0.0)	(0.0)	(14.6)	0.1									
FX Vol**							0.1	(0.0)	(0.0)						
Total		(13.0)	7.0		(141.1)	(21.6)		65.8	1.8		1.8	0.1		0.3	(0.3)

From: Litvin, Eugene
 To: Timperman, Jeffrey
 Cc:
 Subject: RE: Javah curve validation - Q1 '19

Sent: Fri 4/12/2019 2:09 PM

Reviewed and approved.

Reviewed PL summary
 03312019

EQ BC SPX	(668,737)
EQ Vol SPX	(289,319)
FX Vol ATM	(1,535)
IR	7,689,473
IR CCB	81,364
IR ICB	41,857
FX	(21,602,701)
Swaption Vol	2,093,637
Credit	(336,654)

From: Timperman, Jeffrey
 Sent: Wednesday, April 10, 2019 5:22 PM
 To: Litvin, Eugene <Eugene.Litvin@aig.com>
 Cc: Timperman, Jeffrey <JEFFREY.TIMPERMAN@aig.com>
 Subject: Javah curve validation - Q1 '19

[Next](#) [Last](#)

Eugene,

Please review and approve Q1 19 javah curve validation.

CA-1404072: Derivatives Market Data Verification - Walkthrough Example

PnL_Summary_03312019.v1 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat O2 Px Ask

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Rates and Basis Curves (Query results)													Data Date:	3/29/2019			
2	ABBR	INDEX_NAME	TYPE	TEN	PRICE	RESET_FRE	INDE	PAY_FRE	RESET_FRE	INDEX	PAY_FRE	Order	Bloomberg Ticker	Px Bid	Px Ask	Px High	Px Low	Px Last
3	USD	IR.DEP0.USD.2D	DEPO_INST	2D	2.38200							1	US00/N Index	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
4	USD	IR.DEP0.USD.7D	DEPO_INST	7D	2.42300							2	US001W Index	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
5	USD	IR.DEP0.USD.1M	DEPO_INST	1M	2.49450							3	US001M Index	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
6	USD	IR.DEP0.USD.2M	DEPO_INST	2M	2.56388							4	US002M Index	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
7	USD	IR.DEP0.USD.3M	DEPO_INST	3M	2.59975							5	US003M Index	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
8	USD	IR.SWAP.USD.LIBOR.6M	SWAP_INST	6M	2.57460					LIBOR		6	USSWF Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
9	USD	IR.SWAP.USD.LIBOR.1Y	SWAP_INST	1Y	2.52070					LIBOR		7	USSWAP1 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
10	USD	IR.SWAP.USD.LIBOR.2Y	SWAP_INST	2Y	2.39260					LIBOR		8	USSWAP2 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
11	USD	IR.SWAP.USD.LIBOR.3Y	SWAP_INST	3Y	2.31380					LIBOR		9	USSWAP3 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
12	USD	IR.SWAP.USD.LIBOR.4Y	SWAP_INST	4Y	2.28700					LIBOR		10	USSWAP4 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
13	USD	IR.SWAP.USD.LIBOR.5Y	SWAP_INST	5Y	2.28900					LIBOR		11	USSWAP5 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
14	USD	IR.SWAP.USD.LIBOR.6Y	SWAP_INST	6Y	2.30710					LIBOR		12	USSWAP6 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
15	USD	IR.SWAP.USD.LIBOR.7Y	SWAP_INST	7Y	2.32940					LIBOR		13	USSWAP7 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
16	USD	IR.SWAP.USD.LIBOR.8Y	SWAP_INST	8Y	2.35560					LIBOR		14	USSWAP8 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
17	USD	IR.SWAP.USD.LIBOR.9Y	SWAP_INST	9Y	2.38440					LIBOR		15	USSWAP9 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
18	USD	IR.SWAP.USD.LIBOR.10Y	SWAP_INST	10Y	2.41430					LIBOR		16	USSWAP10 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
19	USD	IR.SWAP.USD.LIBOR.12Y	SWAP_INST	12Y	2.46760					LIBOR		17	USSWAP12 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
20	USD	IR.SWAP.USD.LIBOR.15Y	SWAP_INST	15Y	2.52140					LIBOR		18	USSWAP15 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
21	USD	IR.SWAP.USD.LIBOR.20Y	SWAP_INST	20Y	2.56800					LIBOR		19	USSWAP20 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
22	USD	IR.SWAP.USD.LIBOR.25Y	SWAP_INST	25Y	2.58230					LIBOR		20	USSWAP25 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
23	USD	IR.SWAP.USD.LIBOR.30Y	SWAP_INST	30Y	2.58540					LIBOR		21	USSWAP30 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
24	USD	IR.SWAP.USD.LIBOR.35Y	SWAP_INST	35Y	2.57630					LIBOR		22	USSWAP35 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
25	USD	IR.SWAP.USD.LIBOR.40Y	SWAP_INST	40Y	2.56710					LIBOR		23	USSWAP40 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
26	USD	IR.SWAP.USD.LIBOR.45Y	SWAP_INST	45Y	2.55080					LIBOR		24	USSWAP45 TTRA Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
27	USD	IR.SWAP.USD.LIBOR.50Y	SWAP_INST	50Y	2.53450					LIBOR		25	USSWAP50 Curncy	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
28	USD	IR.ICB.USD.1D.FEDFUNDS.3M ICB_INST	2D	1.30000	365 OIS		3	3 LIBOR		3		26						
29	USD	IR.ICB.USD.1D.FEDFUNDS.3M ICB_INST	7D	1.75000	365 OIS		3	3 LIBOR		3		27						
30	USD	IR.ICB.USD.1D.FEDFUNDS.1N ICB_INST	1M	8.70000	365 OIS		3	1 LIBOR		1		28	USBGA CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
31	USD	IR.ICB.USD.1D.FEDFUNDS.2N ICB_INST	2M	16.28800	365 OIS		3	2 LIBOR		2		29	USBGB CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
32	USD	IR.ICB.USD.1D.FEDFUNDS.3N ICB_INST	3M	21.25000	365 OIS		3	3 LIBOR		3		30	USBGC CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
33	USD	IR.ICB.USD.1D.FEDFUNDS.3N ICB_INST	6M	21.37500	365 OIS		3	3 LIBOR		3		31	USBGF CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
34	USD	IR.ICB.USD.1D.FEDFUNDS.3N ICB_INST	1Y	23.62500	365 OIS		3	3 LIBOR		3		32	USBG1 CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?
35	USD	IR.ICB.USD.1D.FEDFUNDS.3N ICB_INST	2Y	24.62500	365 OIS		3	3 LIBOR		3		33	USBG2 CURNCY	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?

BySI_All_Segment_New Summary_BySI_Segment_New ByCCY_All Summary_ByCCY ByCCY_All_RateDiff CCY Drivers Threshold Check IRcurves IR_CDI

CA-1404072: Derivatives Market Data Verification - Walkthrough Example

PnL_Summary_03312019.v1 - Microsoft Excel

Z2 FP vs BBG

	A	B	C	D	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	ABBR	INDEX_NAME	TYPE	TEN	Pz Bi	Pz As	Pz Hig	Pz Lo	Pz L	FP vs BI	FP vs BBG	Within Bid/A	Within High/L	Within Bid/Ask or High/L	Threshold	Within Threshold	Count		
3	USD	IR.DEP0.USD.2D	DEPO_INST	2D	#N/A N/A	2.382	#N/A N/A	#N/A N/A	2.382	0.000	0.00%	No	No	Fail	0.03	Yes	1		
4	USD	IR.DEP0.USD.7D	DEPO_INST	7D	#N/A N/A	2.423	#N/A N/A	#N/A N/A	2.423	0.000	0.00%	No	No	Fail	0.03	Yes	2		
5	USD	IR.DEP0.USD.1M	DEPO_INST	1M	#N/A N/A	2.495	#N/A N/A	#N/A N/A	2.495	0.000	0.00%	No	No	Fail	0.03	Yes	3		
6	USD	IR.DEP0.USD.2M	DEPO_INST	2M	#N/A N/A	2.564	#N/A N/A	#N/A N/A	2.564	0.000	0.00%	No	No	Fail	0.03	Yes	4		
7	USD	IR.DEP0.USD.3M	DEPO_INST	3M	#N/A N/A	2.600	#N/A N/A	#N/A N/A	2.600	0.000	0.00%	No	No	Fail	0.03	Yes	5		
8	USD	IR.SWAP.USD.LIBOR.6M	SWAP_INST	6M	2.614	2.620	2.628	2.606	2.617	0.042	1.64%	No	No	Fail	0.03	No	6		
9	USD	IR.SWAP.USD.LIBOR.1Y	SWAP_INST	1Y	2.538	2.547	2.564	2.528	2.543	0.022	0.87%	No	No	Fail	0.03	Yes	7		
10	USD	IR.SWAP.USD.LIBOR.2Y	SWAP_INST	2Y	2.380	2.385	2.406	2.347	2.382	(0.010)	-0.43%	No	Yes	Pass	0.03	Yes	8		
11	USD	IR.SWAP.USD.LIBOR.3Y	SWAP_INST	3Y	2.303	2.308	2.329	2.264	2.306	(0.008)	-0.35%	No	Yes	Pass	0.03	Yes	9		
12	USD	IR.SWAP.USD.LIBOR.4Y	SWAP_INST	4Y	2.279	2.284	2.304	2.236	2.281	(0.006)	-0.24%	No	Yes	Pass	0.03	Yes	10		
13	USD	IR.SWAP.USD.LIBOR.5Y	SWAP_INST	5Y	2.283	2.287	2.307	2.245	2.285	(0.004)	-0.18%	No	Yes	Pass	0.03	Yes	11		
14	USD	IR.SWAP.USD.LIBOR.6Y	SWAP_INST	6Y	2.300	2.305	2.325	2.266	2.303	(0.005)	-0.20%	No	Yes	Pass	0.03	Yes	12		
15	USD	IR.SWAP.USD.LIBOR.7Y	SWAP_INST	7Y	2.322	2.327	2.346	2.291	2.324	(0.005)	-0.22%	No	Yes	Pass	0.03	Yes	13		
16	USD	IR.SWAP.USD.LIBOR.8Y	SWAP_INST	8Y	2.349	2.353	2.373	2.320	2.351	(0.005)	-0.20%	No	Yes	Pass	0.03	Yes	14		
17	USD	IR.SWAP.USD.LIBOR.9Y	SWAP_INST	9Y	2.377	2.382	2.403	2.351	2.380	(0.005)	-0.21%	No	Yes	Pass	0.03	Yes	15		
18	USD	IR.SWAP.USD.LIBOR.10Y	SWAP_INST	10Y	2.405	2.412	2.432	2.381	2.409	(0.006)	-0.24%	No	Yes	Pass	0.03	Yes	16		
19	USD	IR.SWAP.USD.LIBOR.12Y	SWAP_INST	12Y	2.460	2.465	2.487	2.438	2.463	(0.005)	-0.21%	No	Yes	Pass	0.03	Yes	17		
20	USD	IR.SWAP.USD.LIBOR.15Y	SWAP_INST	15Y	2.516	2.520	2.542	2.497	2.518	x	(0.004)	-0.14%	No	Yes	Pass	0.03	Yes	18	
21	USD	IR.SWAP.USD.LIBOR.20Y	SWAP_INST	20Y	2.562	2.568	2.591	2.547	2.565	x	(0.003)	-0.12%	Yes	Yes	Pass	0.03	Yes	19	
22	USD	IR.SWAP.USD.LIBOR.25Y	SWAP_INST	25Y	2.576	2.581	2.605	2.560	2.579	(0.004)	-0.14%	No	Yes	Pass	0.03	Yes	20		
23	USD	IR.SWAP.USD.LIBOR.30Y	SWAP_INST	30Y	2.580	2.585	2.609	2.566	2.582	x	(0.003)	-0.12%	No	Yes	Pass	0.03	Yes	21	
24	USD	IR.SWAP.USD.LIBOR.35Y	SWAP_INST	35Y	#N/A N/A								22						
25	USD	IR.SWAP.USD.LIBOR.40Y	SWAP_INST	40Y	2.560	2.566	2.591	2.546	2.563	(0.004)	-0.17%	No	Yes	Pass	0.03	Yes	23		
26	USD	IR.SWAP.USD.LIBOR.45Y	SWAP_INST	45Y	#N/A N/A								24						
27	USD	IR.SWAP.USD.LIBOR.50Y	SWAP_INST	50Y	2.525	2.532	2.559	2.506	2.529	(0.006)	-0.24%	No	Yes	Pass	0.03	Yes	25		
28	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	2D													26		
29	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	7D													27		
30	USD	IR.ICB.USD.1D.FEDFUNDS.1N	ICB_INST	1M	#N/A N/A								28						
31	USD	IR.ICB.USD.1D.FEDFUNDS.2N	ICB_INST	2M	#N/A Inval								29						
32	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	3M	19.625	22.625	21.380	20.250	21.125	(0.125)	-0.59%	Yes	Yes	Pass	3.00	Yes	30		
33	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	6M	19.500	22.500	22.000	20.750	21.000	(0.375)	-1.75%	Yes	Yes	Pass	3.00	Yes	31		
34	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	1Y	21.422	25.078	24.375	23.250	23.250	(0.375)	-1.59%	Yes	Yes	Pass	3.66	Yes	32		
35	USD	IR.ICB.USD.1D.FEDFUNDS.3N	ICB_INST	2Y	22.828	26.422	25.250	24.375	24.625	0.000	0.00%	Yes	Yes	Pass	3.59	Yes	33		

BySI_All_Segment_New Summary_BySI_Segment_New ByCCY_All Summary_ByCCY_ByCCY_All_RateDiff CCY Drivers Threshold Check IRcurves IR_CCI

CA-1404072: Derivatives Market Data Verification - Walkthrough Example

PnL_Summary_03312019.v1 - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K
1	IR			FX			Vol IR			Vol FX	
2	PL_Flag	PL_Yes									
3	Cvg_Flag	Covered		PL_Flag	PL_Yes		PL_Flag	PL_Yes		PL_Flag	PL_Yes
4	RISK_CATEGORY	DISCOUNT		Cvg_Flag	Covered		Cvg_Flag	(All)		Cvg_Flag	Covered
5											
6	Row Labels	Sum of P&L		Row Labels	Sum of P&L		Row Labels	Sum of P&L		Row Labels	Sum of P&L
7	Commercial Insurance / PC	(71,370)		Global Capital Markets	(455,902)		Commercial Insurance / PC	19,100		Consumer Insurance / L&R	(1,535)
8	AIG Property Casualty International	(157,542)		AIG Financial Products Corp.	(455,902)		AIG Property Casualty U.S.	19,100		Life & Retirement	(1,535)
9	AIG Property Casualty U.S.	88,926		Corporate and Other	627,059		Corporate and Other	309,012		Global Capital Markets	0
10	AIG International Holdings GMBH	(2,753)		AIG Capital Corp.	(104)		AIG Inc. (AIG Parent)	325,133		AIG Financial Products Corp.	0
11	Consumer Insurance / L&R	8,172,070		AIG Inc. (AIG Parent)	655,726		AIG Capital Corp.	(16,121)		Grand Total	(1,535)
12	Life & Retirement	8,172,070		Talbot International	37,174		Global Capital Markets	3,537			
13	Corporate and Other	268,033		Validus Reinsurance	(65,737)		AIG Financial Products Corp.	3,537			
14	AIG Capital Corp.	(4,780)		Commercial Insurance / PC	(3,536,347)		Consumer Insurance / L&R	1,761,988			
15	AIG Inc. (AIG Parent)	272,923		AIG Property Casualty International	(583,906)		Life & Retirement	1,761,988			
16	Talbot International	21		AIG Property Casualty U.S.	(2,940,114)		Grand Total	2,093,637			
17	Validus Reinsurance	(130)		AIG International Holdings GMBH	(12,328)						
18	Global Capital Markets	(679,260)		Consumer Insurance / L&R	(18,237,511)						
19	AIG Financial Products Corp.	(679,260)		Life & Retirement	(18,237,511)						
20	Grand Total	7,689,473		Grand Total	(21,602,701)						
21											

CA-1404072: Derivatives Market Data Verification - Walkthrough Example

PnL_Summary_03312019.v1 - Microsoft Excel

PivotTable Tools

G12 -20783530.7155898

1	IR	FX	Vol IR	Vol FX							
2 PL_Flag	PL_Yes		PL_Flag	PL_Yes							
3 Cvg_Flag	Covered		Cvg_Flag	Covered							
4 RISK_CATEGORY	DISCOUNT										
5											
6 Row Labels	Sum of IR_01_USD Sum of P&L	Row Labels	Sum of VEGA_CURRENT Sum of P&L	Row Labels	Sum of YEGA_CURRENT Sum of P&L						
7 AUD	13,482	(10,948)	AUD	(233,527,895)	32,905	EUR	295,057	112,522	HKD/USD	(19,475)	(1,598)
8 CAD	258,598	(305,017)	CAD	(576,636,281)	(200,750)	USD	65,462,389	1,981,115	JPY/USD	478	63
9 CHF	1	0	CHF	(502,103)	(342)	Grand Total	65,757,446	2,093,637	Grand Total	(18,997)	(1,535)
10 DKK	5,685	0	DKK	(405,613,645)	(167,044)						
11 EUR	1,735,776	1,331	EUR	(4,609,774,029)	(822,000)						
12 GBP	3,228,932	(230,857)	GBP	(8,718,355,917)	(20,783,531)						
13 JPY	97,355	2,360	HKD	(114,584)	0						
14 NOK	115,843	(7,013)	HUF	(87,235)	(2)						
15 SEK	9,958	0	JPY	1,486,793,138	101,191						
16 USD	(18,477,110)	8,239,417	MXN	6,702,817	(3,206)						
17 Grand Total	(13,011,482)	7,689,473	NOK	(158,501,520)	147,471						
18			NZD	(63,173,541)	27,842						
19			PLN	(130,142)	(175)						
20			SEK	(823,044,308)	59,448						
21			SGD	(7,739,710)	1,511						
22			THB	(258,097)	8						
23			ZAR	(145,077)	588						
24			CLP	(2,938,301)	3,383						
25			Grand Total	(14,107,046,431)	(21,602,701)						

PnL_Summary_03312019.v1 - Microsoft Excel

PivotTable Tools

W8 -668736.603230707

P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE		
Vol EQ																	
PL_Flag	PL_Yes			PL_Flag	PL_Yes			PL_Flag	PL_Yes			PL_Flag	PL_Yes				
Cvg_Flag	Covered			Cvg_Flag	Covered			Cvg_Flag	Covered			Cvg_Flag	Covered				
Row Labels	Sum of VEGA_CURRENT	Sum of SPX P&L	Row Labels	Sum of BC_CURRENT	Sum of P&L	Row Labels	Sum of IR_01_USD	Sum of P&L	Row Labels	Sum of IR_01_USD	Sum of P&L	Row Labels	Sum of IR_01_USD	Sum of P&L	Row Labels		
SPX NYS	749,070	(289,319)	SPX NYS	(206,695)	(668,737)	SPX NYS	261,865	34,894	CAD	213	(107)	EUR	(1,575,682)	(55,255)	JPY	(111,045)	87
Grand Total	749,070	(289,319)	Grand Total	(206,695)	(668,737)	Grand Total	5,802,424	81,364	Grand Total	1,743,173	143,472	Grand Total	(3,967,729)	41,857			

CA-1404072: Derivatives Market Data Verification - Walkthrough Example

File Home Insert Page Layout Formulas Data Review View Acrobat

W644 -12331.7112920133

	E	F	G	H	I	J	K	Q	R	S	T	U	V	W	X	Y	Z	AA
1	POS_RAI	SETTLE_	CYCLE_1	SRC_SYS	POS_ID_1	GRP_ID_STR	CURRENT	FX_AMT	FX_AMT_U	SI_ENTIT	BU	BS_CATE	FX_Diff	P&L	PL_Flag	Cvg_Flag	In_Non-G	Segment
6947	STANDARD	43556	CYCLE	JAVAH	1615982	43467	GBP	(3,617,929)	(4,704,310)	AIG Financia Global Capite DERNATIVE	0.24%	(11,215)	PL_Yes	Covered	N/A	Global Capital Markets		
6949	STANDARD	43556	CYCLE	JAVAH	1730639	36893	GBP	(2,843,243)	(3,697,003)	AIG Financia Global Capite DERNATIVE	0.24%	(8,813)	PL_Yes	Covered	N/A	Global Capital Markets		
6951	STANDARD	43556	CYCLE	JAVAH	1690669	43467	GBP	2,215,260	2,880,451	AIG Property Non-Global C DERNATIVE	0.24%	6,867	PL_Yes	Covered	1690669	Commercial Insurance / PC		
6952	STANDARD	43556	CYCLE	JAVAH	1690669	43466	GBP	(2,398,665)	(3,118,928)	AIG Property Non-Global C DERNATIVE	0.24%	(7,435)	PL_Yes	Covered	1690669	Commercial Insurance / PC		
6958	STANDARD	43556	CYCLE	JAVAH	1888449	43466	GBP	84,710,952	110,147,697	AIG Financia Global Capite DERNATIVE	0.24%	262,579	PL_Yes	Covered	N/A	Global Capital Markets		
6967	STANDARD	43556	CYCLE	JAVAH	1717576	43466	GBP	(1,614,857)	(2,099,761)	AIG Financia Global Capite DERNATIVE	0.24%	(5,006)	PL_Yes	Covered	N/A	Global Capital Markets		
6968	STANDARD	43556	CYCLE	JAVAH	1717576	43467	GBP	1,550,624	2,016,241	AIG Financia Global Capite DERNATIVE	0.24%	4,806	PL_Yes	Covered	N/A	Global Capital Markets		
6969	STANDARD	43556	CYCLE	JAVAH	1887882	43466	GBP	(5,217,099)	(6,783,674)	AIG Financia Global Capite DERNATIVE	0.24%	(16,171)	PL_Yes	Covered	N/A	Global Capital Markets		
6970	STANDARD	43556	CYCLE	JAVAH	1887882	43467	GBP	5,025,815	6,534,951	AIG Financia Global Capite DERNATIVE	0.24%	15,579	PL_Yes	Covered	N/A	Global Capital Markets		
6971	STANDARD	43556	CYCLE	JAVAH	1921211	43467	GBP	4,151,079	5,397,552	AIG Property Non-Global C DERNATIVE	0.24%	12,867	PL_Yes	Covered	1921211	Commercial Insurance / PC		
6972	STANDARD	43556	CYCLE	JAVAH	1921211	43466	GBP	(4,289,062)	(5,576,968)	AIG Property Non-Global C DERNATIVE	0.24%	(13,295)	PL_Yes	Covered	1921211	Commercial Insurance / PC		
6976	STANDARD	43556	CYCLE	JAVAH	1888448	43466	GBP	(237,190,667)	(308,413,551)	Life & Retire Non-Global C DERNATIVE	0.24%	(735,221)	PL_Yes	Covered	1888448	Consumer Insurance / L&R		
6983	STANDARD	43556	CYCLE	JAVAH	1902520	43466	GBP	(18,126,084)	(23,568,929)	Life & Retire Non-Global C DERNATIVE	0.24%	(56,186)	PL_Yes	Covered	1902520	Consumer Insurance / L&R		
6985	STANDARD	43556	CYCLE	JAVAH	1596250	1	GBP	3,391,107	4,409,378	AIG Financia Global Capite DERNATIVE	0.24%	10,511	PL_Yes	Covered	N/A	Global Capital Markets		
6986	STANDARD	43556	CYCLE	JAVAH	1596250	2	GBP	(3,129,267)	(4,068,913)	AIG Financia Global Capite DERNATIVE	0.24%	(9,700)	PL_Yes	Covered	N/A	Global Capital Markets		
6996	STANDARD	43556	CYCLE	JAVAH	1915987	43466	GBP	(3,695,758)	(4,805,508)	AIG Financia Global Capite DERNATIVE	0.24%	(11,456)	PL_Yes	Covered	N/A	Global Capital Markets		
6997	STANDARD	43556	CYCLE	JAVAH	1915987	43467	GBP	3,576,378	4,650,282	AIG Financia Global Capite DERNATIVE	0.24%	11,086	PL_Yes	Covered	N/A	Global Capital Markets		
7005	STANDARD	43556	CYCLE	JAVAH	1604065	43467	GBP	3,471,249	4,513,585	AIG Financia Global Capite DERNATIVE	0.24%	10,760	PL_Yes	Covered	N/A	Global Capital Markets		
7006	STANDARD	43556	CYCLE	JAVAH	1604065	43466	GBP	(3,750,950)	(4,877,274)	AIG Financia Global Capite DERNATIVE	0.24%	(11,627)	PL_Yes	Covered	N/A	Global Capital Markets		
7011	STANDARD	43556	CYCLE	JAVAH	1807122	43466	GBP	50,361,304	65,483,641	AIG Financia Global Capite DERNATIVE	0.24%	156,105	PL_Yes	Covered	N/A	Global Capital Markets		
7012	STANDARD	43556	CYCLE	JAVAH	1807122	43467	GBP	(1,159,018)	(1,507,044)	AIG Financia Global Capite DERNATIVE	0.24%	(3,593)	PL_Yes	Covered	N/A	Global Capital Markets		
7013	STANDARD	43556	CYCLE	JAVAH	1723165	36893	GBP	(5,771,572)	(7,504,642)	AIG Financia Global Capite DERNATIVE	0.24%	(17,890)	PL_Yes	Covered	N/A	Global Capital Markets		
7018	STANDARD	43556	CYCLE	JAVAH	1814830	36893	GBP	3,832,185	4,982,901	AIG Financia Global Capite DERNATIVE	0.24%	11,879	PL_Yes	Covered	N/A	Global Capital Markets		
7022	STANDARD	43556	CYCLE	JAVAH	1922396	43466	GBP	(1,179,675)	(1,533,904)	AIG Financia Global Capite DERNATIVE	0.24%	(3,857)	PL_Yes	Covered	N/A	Global Capital Markets		
7023	STANDARD	43556	CYCLE	JAVAH	1922396	43467	GBP	1,155,935	1,503,035	AIG Financia Global Capite DERNATIVE	0.24%	3,583	PL_Yes	Covered	N/A	Global Capital Markets		
7024	STANDARD	43556	CYCLE	JAVAH	1908892	43466	GBP	(25,625,368)	(33,320,075)	AIG Financia Global Capite DERNATIVE	0.24%	(79,431)	PL_Yes	Covered	N/A	Global Capital Markets		
7029	STANDARD	43556	CYCLE	JAVAH	1801216	36893	GBP	1,543,687	2,007,220	AIG Financia Global Capite DERNATIVE	0.24%	4,785	PL_Yes	Covered	N/A	Global Capital Markets		
7033	STANDARD	43556	CYCLE	JAVAH	1919824	43466	GBP	(3,494,405)	(4,543,694)	AIG Financia Global Capite DERNATIVE	0.24%	(10,832)	PL_Yes	Covered	N/A	Global Capital Markets		
7034	STANDARD	43556	CYCLE	JAVAH	1919824	43467	GBP	3,407,659	4,430,900	AIG Financia Global Capite DERNATIVE	0.24%	10,563	PL_Yes	Covered	N/A	Global Capital Markets		
7036	STANDARD	43556	CYCLE	JAVAH	1829806	43466	GBP	10,066,730	13,089,537	AIG Financia Global Capite DERNATIVE	0.24%	31,204	PL_Yes	Covered	N/A	Global Capital Markets		
7038	STANDARD	43556	CYCLE	JAVAH	1630937	36892	GBP	(6,026,624)	(7,836,281)	AIG Financia Global Capite DERNATIVE	0.24%	(18,681)	PL_Yes	Covered	N/A	Global Capital Markets		
7039	STANDARD	43556	CYCLE	JAVAH	1852933	43466	GBP	(5,031,786)	(6,542,716)	AIG Property Non-Global C DERNATIVE	0.24%	(15,597)	PL_Yes	Covered	1852933	Commercial Insurance / PC		
7040	STANDARD	43556	CYCLE	JAVAH	1628325	20-1	GBP	(2,287,836)	(2,974,820)	AIG Inc. (AIG Non-Global C DERNATIVE	0.24%	(7,092)	PL_Yes	Covered	1628325	Corporate and Other		
7041	STANDARD	43556	CYCLE	JAVAH	1628325	15-1	GBP	(1,753,956)	(2,280,629)	AIG Inc. (AIG Non-Global C DERNATIVE	0.24%	(5,437)	PL_Yes	Covered	1628325	Corporate and Other		
7042	STANDARD	43556	CYCLE	JAVAH	1628325	21-1	GBP	(1,804,807)	(2,346,749)	AIG Inc. (AIG Non-Global C DERNATIVE	0.24%	(5,594)	PL_Yes	Covered	1628325	Corporate and Other		
7043	STANDARD	43556	CYCLE	JAVAH	1823484	43466	GBP	9,751,835	12,680,085	AIG Financia Global Capite DERNATIVE	0.24%	30,228	PL_Yes	Covered	N/A	Global Capital Markets		
7052	STANDARD	43556	CYCLE	JAVAH	1881884	43466	GBP	(3,504,287)	(4,556,543)	AIG Property Non-Global C DERNATIVE	0.24%	(10,862)	PL_Yes	Covered	1881884	Commercial Insurance / PC		
7053	STANDARD	43556	CYCLE	JAVAH	1881884	43467	GBP	3,343,885	4,347,976	AIG Property Non-Global C DERNATIVE	0.24%	10,365	PL_Yes	Covered	1881884	Commercial Insurance / PC		
7080																		

Ready Filter Mode

Average: (9,997) Count: 2079 Sum: (20,783,531)



Private Equity and Hedge Fund Verification

Control CA-1405168 (Risk – Medium, Frequency –Quarterly)

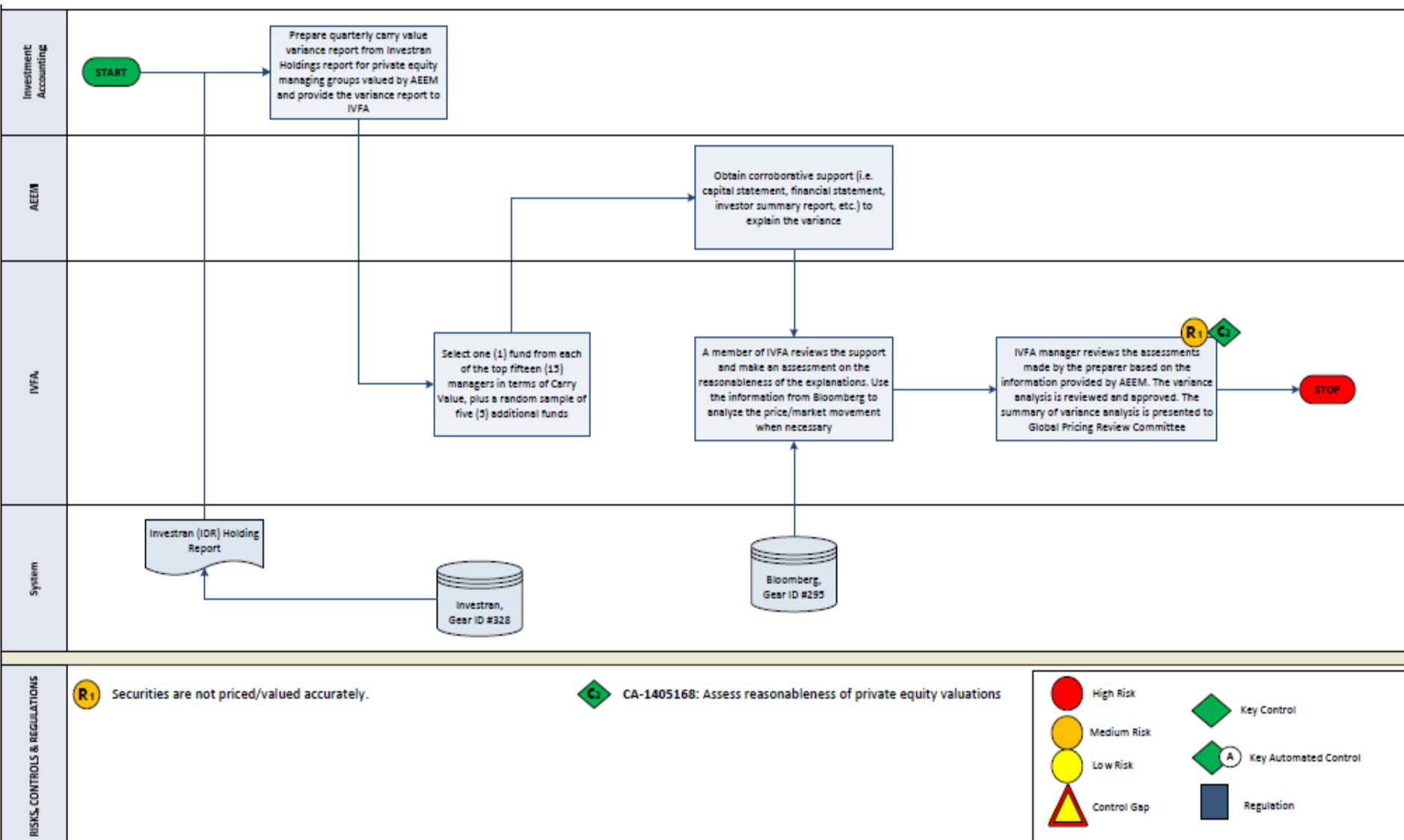
Description	Additional Description
Quarterly, the Independent Valuation and Financial Analytics (IVFA) group assesses the reasonableness of private equity valuations by reviewing the quarter change in valuation of a sample of investments and the drivers that explain these returns, support for which is provided by the Alternatives Equities and External Mandates (AEEM) group. IVFA management provides evidence of their review via email.	From the quarter-end Investran Holdings Report, the IVFA group will select one (1) fund from each of the top fifteen (15) managers in terms of Market Value, plus a random sample of five (5) additional funds for the AEEM group to explain the variance drivers. For these twenty (20) funds, AEEM then obtains corroborative support (i.e. capital statement, financial statement, investor summary report, etc.) to explain the variance, and forwards same to the IVFA group. A member of the IVFA group reviews this support and then makes an assessment on the reasonableness of the explanations. The assessments are subject to an independent review by a manager. The results are presented to the Global Pricing Review Committee (GPRC).

Control CA-1405169 (Risk – Medium, Frequency –Quarterly)

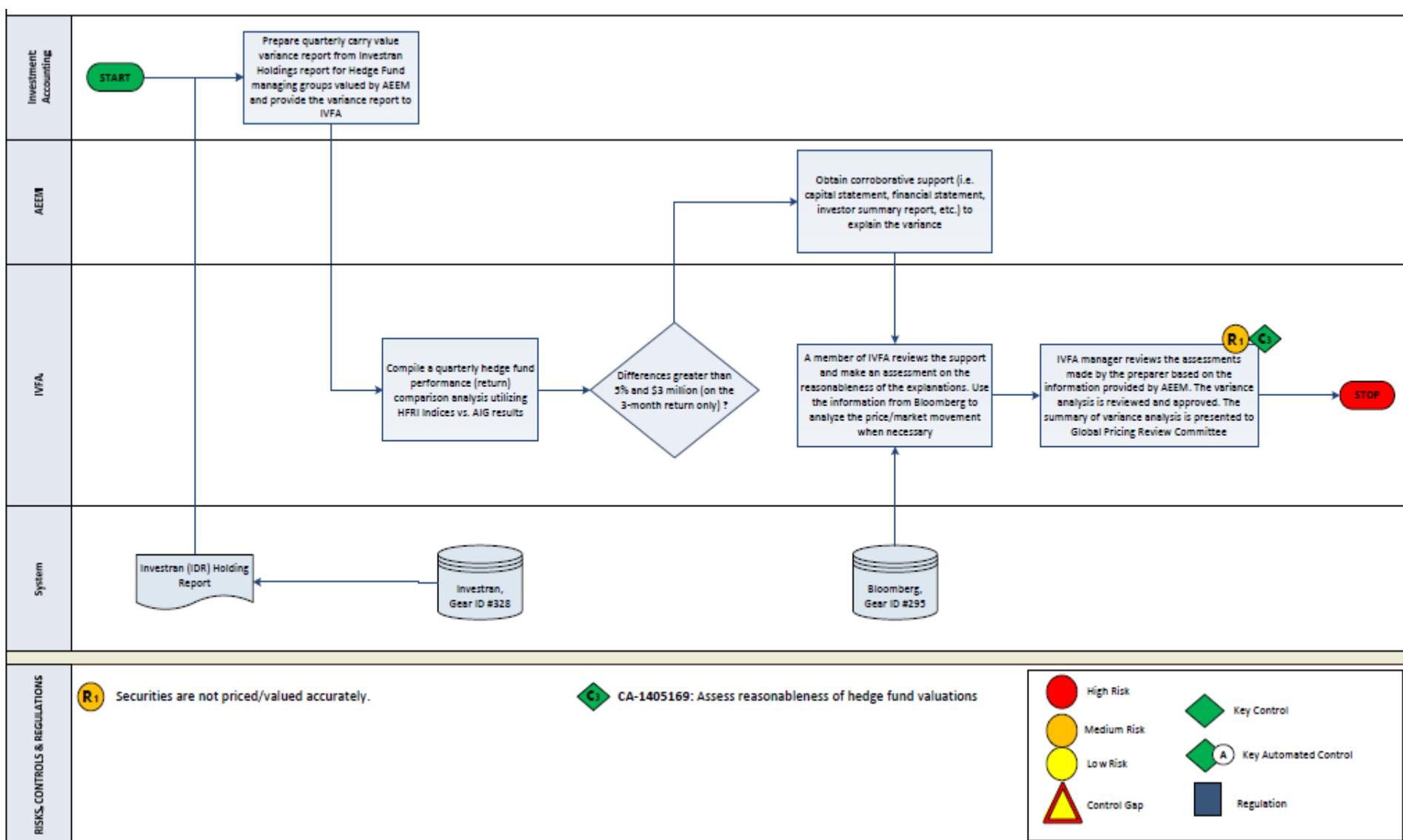
Description	Additional Description
Quarterly, the Independent Valuation and Financial Analytics (IVFA) group assesses the reasonableness of hedge fund performance of AIG positions versus the appropriate Hedge Fund Research Performance Indices by reviewing any fund whose performance varies by 5% or more (positive or negative) and \$3 million, and obtaining support for the drivers of these returns from the Alternatives Equities and External Mandates (AEEM) group. IVFA management provides evidence of their review via email.	From the quarter-end Investran Holdings Report, IVFA compiles a hedge fund performance (return) comparison analysis utilizing HFR Indices vs. AIG results. Any differences between AIG vs. HFR greater than 5% and \$3 million (on the 3-month return only) are identified and submitted to AEEM for their commentary. For noted variances in excess of these thresholds, AEEM communicates with the underlying fund(s), obtains corroborative support (i.e. capital statement, financial statement, investor letters, etc.) to explain the variance, and then makes an assessment on its reasonableness. The assessments are subject to an independent review by a manager.

On May 08 2019, Eugene Litvin has verified that the above control descriptions are accurate for 2019. ✓

Private Equity Verification Process Flowchart



Hedge Fund Verification Process Flowchart



CA-1405168 & CA-1405169: PE & HF Valuation Review - Walkthrough Example

Sun 4/7/2019 3:40 PM

Velasco, Christopher

1Q19_Variance Report - AEEM

To Timperman, Jeffrey; Chu, Yue; Leung, Florence S; Pastor, Lifai; Willim, Christopher; Litvin, Eugene; Vilicich, Bogdan; Hennig, John
Cc Ochman, Richard; Racz, Monika; Gilkarov, Nathan

 1Q19_Variance Report_AEEM.xlsx 446 KB

Hello all.

Attached is the 1Q19 Variance Report for AEEM.

 Christopher Velasco
Office 212.770.4855
Email Christopher.Velasco@aig.com

CA-1405168: Private Equity Verification - Walkthrough Example

RE: 1Q 19 PE Report - Message (HTML)

File Message Help Tell me what you want to do

Thu 4/18/2019 1:50 PM

Pastor, Lifai

RE: 1Q 19 PE Report

To: Timperman, Jeffrey

Cc: Bhuskute, Hemant; Litvin, Eugene; Racz, Monika; Gigon, Gilles; Forster, Andrew

1Q19_Variance Report_AEEM_PE Performance Analysis_IVFA review.v2.xlsx
349 KB

Hi Jeff,

Please see attached file for the 1Q19 PE commentary for funds that were selected for review. Since I'm out next week, thought I would send this earlier to you. The support files will come in a separate email. Please let me know if you have any questions.

Thanks,
Lifai

From: Timperman, Jeffrey
Sent: Tuesday, April 09, 2019 3:20 PM
To: Racz, Monika <Monika.Racz@aig.com>; Leung, Florence S <Florence.Leung@aig.com>; Chu, Yue <Yue.Chu@aig.com>; Pastor, Lifai <Lifai.Pastor@aig.com>; Willim, Christopher <Christopher.Willim@aig.com>
Cc: Conklin, James <James.Conklin@aig.com>; Ochman, Richard <Richard.Ochman@aig.com>; Chen, James <James.Chen@aig.com>; Kamau, Eric <Eric.Kamau@aig.com>; Bhuskute, Hemant <Hemant.Bhuskute@aig.com>; Litvin, Eugene <Eugene.Litvin@aig.com>; Timperman, Jeffrey <JEFFREY.TIMPERMAN@aig.com>
Subject: 1Q 19 PE Report

Hello,

I have gone through the 'Deal Level - Private Equity' tab to identify the PE funds for review:

1. 15 funds from each of the top 15 Investment Family's (by Carry value)
2. 5 additional funds from Investment Family's not included in the top 15

In terms of turn-around time, I was hoping for on or before **Wednesday, 4/24** for the commentary and the supporting documents to be sent. Please let me know if you think this might be an issue.

CA-1405168: Private Equity Verification - Walkthrough Example

AutoSave Off File Home Insert Page Layout Formulas Data Review View Help ACROBAT Power Pivot Tell me what you want to do Share

1Q19_Variance Report_AEEM_PE Performance Analysis_IVFA review.v1.xlsx - Read-Only - Excel Hegde, Shreedhar

A	B	C	D	E	F	G
#	Name of Investment	Beginning Q1 Carry Value (\$MM's)	Fund 3mo Return (\$MM's)	Fund 3mo Return (%)	AEEM Comments (edited)	Status*
1	AEA Investors Fund V LP	9.84	-1.92	-19.50%	At 4Q2018, the fund's portfolio investments are comprised of both publicly and non-publicly traded securities and are concentrated in ten investments. The decrease in value was primarily driven by the investments in Common Stock.	Closed
2	Altaris Constellation Partners IV, L.P.	3.97	.42	10.60%	The fund has one portfolio company that generated strong returns in 4Q.	Closed
3	American Securities Partners VII, LP	34.94	-5.43	-15.55%	The decrease in value from 3Q18 to 4Q18 was primarily driven by several specific investments.	Closed
4	Apollo Investment Fund VII, L.P.	12.58	-1.91	-15.21%	In Q4, valuations decreased primarily driven by depreciation in publicly listed holdings	Closed
5	BREP V	17.16	-2.02	-11.77%	Fund's portfolio unrealized value decreased by \$80mm QoQ, driven in part by one investment.	Closed
6	BridgeBio Pharma LLC	40.00	.00	0.00%	Per fund manager, our position is held at cost so no valuation change.	Closed
7	Carlyle Partners V, L.P. (2018)	24.04	2.17	9.03%	AIG bought this interest at a discount from an existing investor in Q4. The purchase price was \$24.3mm. Actual fund valuation declined from Q3 to Q4. However, because of the discount, we recorded a markup in Q4 to \$26.5mm when we received the Q4 capital statement.	Closed
8	Clarus Lifesciences II	8.30	-1.99	-23.93%	The decrease in fund valuation from \$371.1mm in Q3 to \$308.8mm in Q4 was driven by the following investments a few main investments.	Closed
9	Coatue Private Fund II LP	34.43	.00	0.00%	The fund did not provide Q4 statements in time for the quarterly close so no valuation change.	Closed
10	Crestview Partners II, LP	11.76	-2.39	-20.31%	At 4Q, the Fund was valued at a 2.4x gross multiple or 1.8x net multiple vs 3Q's value at 2.5x gross multiple or 2.0x net multiple. The decrease in value from 3Q18 to 4Q18 was primarily driven by the decline in several publicly traded companies.	Closed
11	EIG Energy Fund XVI, L.P.	40.90	-.89	-2.18%	The unrealized value for the fund declined from \$4.93bn in Q3 to \$4.46bn in Q4 and the decline was primarily driven by the several specific investments.	Closed
12	General Atlantic Partners AIV-1 A, L.P. (2015)	45.54	4.12	9.05%	The partnership contained several investments that drove performance.	Closed
13	Green Equity Investors V LP	13.83	-.27	-1.98%	In Q4, GEI V's total value decreased by 1.7%, driven by decreases in the fair values of two main investments.	Closed
14	HPS Mezzanine Partners III L.P.	36.78	.77	2.09%	As a result of a sale, AIG received the distribution which lowered our carry value and we then received a valuation that was more than what we calculated.	Closed
15	LS Power Fund III Feeder 1, LP	47.57	-.32	-0.67%	Although there were no changes to the valuations of portfolio investments in Q4, there was a loss resulting from partnership fees that decreased partners' capital QoQ.	Closed
16	Platinum Equity Capital Partners IV, L.P.	47.54	6.55	13.78%	The increase in fund valuation QoQ was driven by several specific investments.	Closed
17	Riverstone Global Energy and Power Fund VI, LP	20.52	-3.08	-15.01%	The increase in fund valuation QoQ was driven by several specific investments.	Open
18	Tiger Global Private Investment Partners IX, L.P.	31.30	-4.42	-14.11%	The Fund declined 13% in QoQ valuations. The primary driver was on US equity for which the stock declined in Q4.	Closed
19	TSG7 A, L.P.	21.21	.38	1.81%	The increase in fund valuation QoQ was driven by several specific investments.	Closed
20	Vista Equity Partners Fund VI, L.P.	31.47	.54	1.71%	One major event happened during the Quarter which was a fund sale.	Closed

GPRC Summary Edited

Deal Level - Private Equity

Private Equity

CA-1405168: Private Equity Verification - Walkthrough Example

The increase in fund valuation QoQ was driven by the following investments:

G111	A	F	G	H	I	J
1 Managing Group			AEEM Comments			
3	Row Labels	Count	AEEM Comments	Supporting Document(s) File name	Supporting Document(s) Description	IVFA Review and Comments:
Carlyle Partners V, L.P. (2018)	Top 15		<p>AIG bought this interest at a discount from an existing investor in Q4. The purchase price was \$24.3mm. Actual fund valuation declined from Q3 to Q4. However, because of the discount, we recorded a markup in Q4 to \$26.5mm when we received the Q4 capital statement.</p>	1. 3Q18_Carlyle Partners V, LP_financial stmt 2. 3Q18_Carlyle Partners V, LP_Quarterly Update 3. 3Q18_Carlyle Partners V, LP_Summary 4. 4Q18_Carlyle Partners V, LP_AGL cap stmt 5. 4Q18_Carlyle Partners V, LP_audited financial stmt 6. 4Q18_Carlyle Partners V, LP_Financial Statements Certification 7. 4Q18_Carlyle Partners V, LP_Summary Investment Schedule 8. 4Q18_Carlyle Partners V, LP_Summary 9. 4Q18_Carlyle Partners V, LP_Quarterly Fund Update 10. Carlyle Partners V, L.P. (2018) - Assignment Agreement	1-10. Financial statements / Quarterly Updates / Summary Investment schedule / Assignment agreement	Document #10 describes the transaction between the investor and AIG. The \$24mln purchase price is on page 2 (of 68). The Fair Value of \$26.5mln can be confirmed in document #4 on page 1 (of 9).
General Atlantic Partners AIV-1 A, L.P. (2015)	Top 15		<p>The partnership contained the following investments at 4Q18: Aimbridge, Alternate Solutions, Authentic Brands Group, EN Engineering, European Wax, HireRight GIS, Landmark Health, OneOncology, Red Ventures, and Torchy's Tacos.</p> <p>The primary driver for the increase in value over the quarter were write-ups to the Authentic Brands Group (\$1.1m), and Red Ventures (\$2.9m) investments during the year-end valuation process. Both investments continue to perform well. The other investments were marked at or near their previous valuation and had a minimal impact.</p>	1. EXTERNAL FW General Atlantic Partners AIV-1 A LP (2015)	1. Email	Commentary support is provided in detail from the email sent by a representative at General Atlantic.
Tiger Global Private Investment Partners IX, L.P.	Top 15		<p>The Fund declined 13% in QoQ valuations. The primary driver was Spotify for which the stock declined in Q4.</p>	1. 4Q18_TIGER GLOBAL PRIVATE INVESTMENT PARTNERS IX, LP_Portfolio Summary 2. EXTERNAL RE Tiger Global Private Investment Partners IX and X	1-2. Portfolio Summary	Fund performance is detailed in email document #2 from Tiger. Also confirmed stock movement.

CA-1405169: Hedge Funds Verification - Walkthrough Example

AutoSave (Off) 1Q19_Variance Report_AEEM_HF Performance Analysis_JVFA review.v1.xlsx - Read-Only - Excel Hedge, Shreedhar

File Home Insert Page Layout Formulas Data Review View Help ACROBAT Power Pivot

N74 Performance summary results, attribution and sector breakdowns are found on page 1 (of 1) of document #2.

	B	G	H	I	J	K	L	M	N	O	
1	Sum of Carry Value Calculation										
2	(All)							9148.5			
3											
4											
5											
6	Name of Investment	HFRX Index	HFRX 3mo Return	Difference HFRX	AIG vs Y	Requires AEEM Review	AEEM Comments	Supporting Document(s) File Name	Supporting Document(s) Description	IVFA Review and Comments:	Follow up questions
7	THE CHILDRENS INVESTMENT FUND LP	HFRX Event Driven	1.14%	6.92%	Y		TCI contributed to performance with activist positions in the US cable and	1. TCI Q1 2019 Investor Newsletter	1. Newsletter	Cable exposures (Time Warner) is described starting on page 6 of the investor newsletter.	
25	Whale Rock Flagship Fund LP	HFRX Equity Hedge	0.68%	12.02%	Y		Whale Rock contributed to performance in US technology equities	1. Whale Rock Capital Quarterly Letter Q1 2019	1. Quarterly letter	Technology exposures and performance are described throughout the Quarterly Letter.	
29	Pelham Long/Short Fund LP	HFRX Equity Hedge	0.68%	5.26%	Y		Pelham contributed to performance in European equities	1. Investor Letter 2019.01 (master) 2. Investor Letter 2019.02 3. Investor Letter 2019.03	1-3. Investor letter	Performance for the EUR class is shown on page 4 (of 14) in document #2. Specific positions are listed on page 7 (of 14) in the same document.	
32	Valueact Capital Partners II, L.P.	HFRX Event Driven	1.14%	5.81%	Y		Valueact contributed to performance in US financial and US technology equities	1. February 2019 Fund Financials 2. January 2019 Fund Financials 3. March 2019 Fund Financials	1-3. Fund financials	Specific equity performance is detailed on page 2 (of 3) in document #1.	
46	Viking Global Opportunities LP	HFRX Global	0.79%	5.36%	Y		Viking contributed to performance in US technology equities, and healthcare	1. VGO_LP_Quarterly_Letter_1Q19	1. Quarterly letter	Top ten long positions (including technology and healthcare) are detailed on page 2 (of 20) in the	
	Janchor Partners Pan-Asian U.S. Feeder						Janchor contributed to performance in Chinese technology and telecommunication equities	1. _EXTERNAL_Janchor Partners March YTD 2019 Update_9_9% gross_8_0% net_ 2. _Janchor Partners February YTD 2019 Update_4_9% gross_4_0% net_ 3. _Janchor Partners January YTD 2019 Update_4_5% gross_3_7% net_ 4. FW Janchor Partners 4Q18 Quarterly Review 5. FW EXTERNAL Janchor Partners 1Q19 Quarterly Review	1-3. Update emails	AEEM provided additional documents (#4 & 5) that mention Chinese investments mainly in the tech sector contributing to the fund's performance.	Do you have any documentation indicating exposures to Chinese Technology and telecommunications equity sector?
48		HFRX Equity Hedge	0.68%	5.30%	Y						
53	TIGER GLOBAL	HFRX Equity Hedge	0.68%	16.73%	Y		Tiger Global contributed to performance in US equities	1. Tiger Global Investments Q1 2019 Performance & Exposure Report	1. Performance Exposure report	Public equity exposure and performance is detailed on page 1 (of 2) of document #1.	
	JHL Capital Group Fund LLC - (Feeder)						JHL detracted from performance with short exposure to developed market indices	1. JHL Attribution and Exposure Summary 1-31-19 2. JHL Attribution and Exposure Summary 2-28-19 3. JHL Attribution and Exposure Summary 3-31-19 4. JHL Capital Group LLC - 1Q 2019	1-4. Attribution / Exposure / Summary	Short bias / exposure is written about on page 1 (of 4) under the Investment Outlook section in document #4.	
57		HFRX Event Driven	1.14%	-8.65%	Y						
	Palomino Fund Ltd.						Palomino contributed to performance with long exposure to US technology equities	1. 20190131 Palo Monthly Portfolio Allocation and Perf Breakdown 2. 20190228 Palo Monthly Portfolio Allocation and Perf Breakdown 3. 20190331 Summary Financial Information - Palo 4. Performance Estimates 20190131 Palo 5. Performance Estimates 20190228 Palo 6. Performance Estimates 20190331 Palo 7. Appaloosa_Palomino 13F	1-6. Performance breakdown / estimates	Confirmed on FLNG (13F's) on Bloomberg, the fund had heavy exposure in US equity tech.	Do you have any documentation indicating exposures to US Technology equities? AEEM - Confirmed Palomino is the same as Appaloosa Fund and can find 13F's on Bloomberg under that name. (https://en.wikipedia.org/wiki/Appaloosa_Management)

GPCR Deal Level - Hedge Fund Hedge Fund HFRX Returns HFRX Mapping



CA-1405169: Hedge Funds Verification - Walkthrough Example

AutoSave (Off) 1Q19_Variance Report_AEEM_HF Performance Analysis_IVFA review.v1.xlsx - Read-Only - Excel Hegde, Shreedhar X

File Home Insert Page Layout Formulas Data Review View Help ACROBAT Power Pivot Tell me what you want to do Share

A	B	C	D	E	F	G	H	I	J
#	Name of Investment	Beginning Q1 Carry Value (\$MM's)	Fund 3mo Return (\$MM's)	Fund 3mo Return (%)	HFRX 3mo Return (%)	Return Difference (%)	Return Difference (\$MM's)	AEEM Comments	Status
1	12 West Capital Fund, LP	39.72	4.19	10.54%	0.68%	9.86%	3.92	12 West contributed to performance in US small/mid cap equities	Closed
2	Cadian Fund, LP	-4.43	9.54	-215.07%	0.68%	-215.75%	9.57	Public Equity team has redeemed from Cadian	OPEN
3	Darsana Fund LP	30.81	5.22	16.94%	0.68%	16.26%	5.01	Darsana contributed to performance in US technology equities	Closed
4	Greenlight Capital (Gold), LP	15.10	-10.16	-67.32%	0.68%	-68.00%	-10.27	Public equity team has redeemed from Greenlight Capital	OPEN
5	Janchor Partners Pan-Asian U.S. Feeder Fund	92.43	5.52	5.97%	0.68%	5.30%	4.89	Janchor contributed to performance in Chinese technology and telecommunication equities	OPEN
6	JHL Capital Group Fund LLC - (Feeder) - Class B	87.06	-6.54	-7.51%	1.14%	-8.65%	-7.53	JHL detracted from performance with short exposure to developed market indices	Closed
7	Nokota Capital, LP	54.29	-6.23	-11.47%	0.68%	-12.14%	-6.59	Nokota detracted from performance with long exposure to equities during December 2018 sell-off.	Closed
8	Palomino Fund Ltd.	61.20	8.83	14.42%	-0.41%	14.83%	9.08	Palomino contributed to performance with long exposure to US technology equities	OPEN
9	Parvus European Absolute Opportunities Fund, LP	4.46	-4.46	-100.00%	0.68%	-100.68%	-4.49	Public equity team has redeemed from Parvus European	Closed
10	Pelham Long/Short Fund LP	67.49	4.01	5.94%	0.68%	5.26%	3.55	Pelham contributed to performance in European equities	Closed
11	Q4 Funding LP	48.97	-2.69	-5.50%	1.14%	-6.64%	-3.25	Q4 detracted from performance due to distressed/re-org equity positions in the energy sector	OPEN
12	The Childrens Investment Fund LP	172.93	13.93	8.06%	1.14%	6.92%	11.96	TCI contributed to performance with activist positions in the US cable and telecommunications industries.	Closed
13	Tiger Global	69.41	12.08	17.41%	0.68%	16.73%	11.61	Tiger Global contributed to performance in US equities	Closed
14	Valueact Capital Partners II, L.P.	119.01	8.27	6.95%	1.14%	5.81%	6.92	Valueact contributed to performance in US financial and US technology equities	Closed
15	Viking Global Opportunities LP	92.28	5.68	6.15%	0.79%	5.36%	4.95	Viking contributed to performance in US technology equities, and healthcare privates	Closed
16	Whale Rock Flagship Fund LP	125.89	15.99	12.70%	0.68%	12.02%	15.14	Whale Rock contributed to performance in US technology equities	Closed
17								*Closed = IVFA has fully reviewed AEEM comments and confirmed with supporting documentation	
18								*Open = IVFA still awaiting additional confirmation information (as of GPRC meeting)	
19									
20									

GPRC

Deal Level - Hedge Fund

Hedge Fund

HFRX Returns

HFRX Mapping



Ready

CA-1405169: Hedge Funds Verification - Walkthrough Example

AutoSave (Off) 1Q19_Variance_Report_AEEM_HF Performance Analysis_IVFA review.v1.xlsx - Read-Only - Excel Hegde, Shreedhar

File Home Insert Page Layout Formulas Data Review View Help ACROBAT Power Pivot Share

A11 A B AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC

		2018												2019				
2	HFRX Index	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Trailing 3mo Return	YTD
3	HFRX Event Driven	1.76%	-4.38%	-2.16%	0.43%	0.36%	-0.46%	-0.54%	-0.03%	-0.51%	-4.57%	-0.88%	-1.18%	2.53%	-0.18%	1.52%	1.14%	-11.68%
4	HFRX Equity Hedge	3.41%	-1.49%	-0.69%	-0.55%	0.30%	-0.67%	0.72%	-0.23%	-1.63%	-3.95%	-0.63%	-4.23%	3.92%	1.16%	0.79%	0.68%	-9.43%
5	HFRX Macro	3.80%	-4.86%	-0.79%	0.46%	-0.36%	0.12%	-1.10%	2.41%	-0.63%	-2.65%	-0.19%	0.76%	-1.91%	0.76%	0.30%	-0.41%	-3.25%
6	HFRX Relative Value	1.09%	0.23%	-0.33%	0.23%	0.58%	0.39%	-0.05%	0.31%	0.13%	-1.04%	-0.66%	-2.02%	2.48%	0.30%	-0.16%	0.71%	-1.17%
7	HFRX Distressed	1.52%	-1.15%	-5.77%	0.44%	0.49%	-1.73%	0.24%	0.23%	0.17%	-1.23%	-1.47%	-1.49%	2.48%	0.04%	-0.55%	0.99%	-9.51%
8	HFRX Global	2.45%	-2.42%	-0.98%	0.09%	0.26%	-0.19%	-0.15%	0.45%	-0.69%	-3.11%	-0.62%	-1.93%	2.13%	0.63%	-0.17%	0.79%	-6.74%
9	Not mapped (see comment)																N/A	N/A

11 HFRX Event Driven Index | Hedge F +

12 https://www.hedgefundresearch.com/indices/hfrx-event-driven-index

13 HFR Hedge Fund Strategy Classifications

14 Index Constituents

15 EU Benchmark Regulation

16 VIEW AS:

17 Rate of Return

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
2019	2.53%	-0.18%	-1.52%										0.80%
2018	1.76%	-4.38%	-2.16%	0.43%	0.36%	-0.46%	-0.54%	-0.03%	-0.51%	-4.57%	-0.88%	-1.18%	-11.68%
2017	1.05%	1.55%	0.22%	0.70%	0.93%	-0.02%	1.00%	0.08%	0.70%	-0.12%	-0.25%	0.30%	6.48%

GPCC Deal Level - Hedge Fund Hedge Fund

Ready

AIG

CA-1405168 & CA-1405169: PE & HF Valuation Review - Walkthrough example

Attachment Tools RE: HF / PE Validation Review - Q1 '19 - Message (HTML)

File Message Help Attachments Tell me what you want to do

Thu 5/2/2019 4:16 PM

LE Litvin, Eugene

RE: HF / PE Validation Review - Q1 '19

To Timperman, Jeffrey

1Q19_Variance Report_AEEM_HF Performance Analysis_IVFA review.v1.xlsx 652 KB

1Q19_Variance Report_AEEM_PE Performance Analysis_IVFA review.v1.xlsx 352 KB

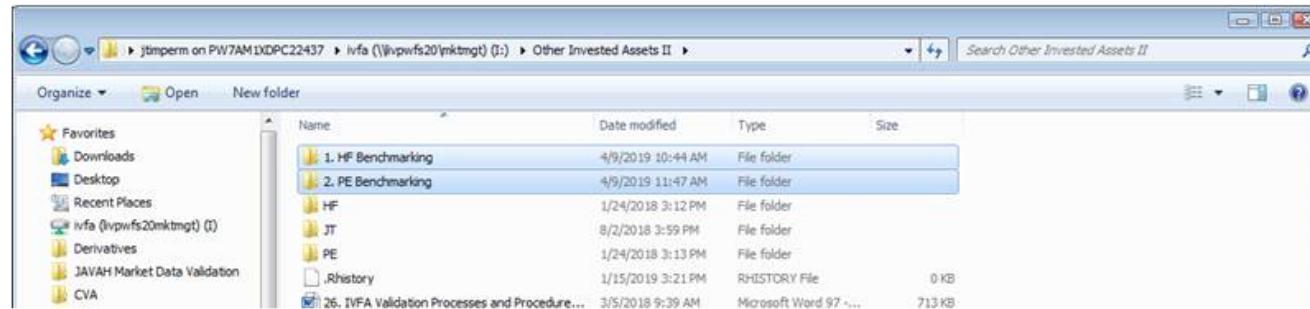
Reviewed and approved.

From: Timperman, Jeffrey
Sent: Tuesday, April 30, 2019 3:37 PM
To: Litvin, Eugene <Eugene.Litvin@aig.com>
Cc: Timperman, Jeffrey <JEFFREY.TIMPERMAN@aig.com>
Subject: HF / PE Validation Review - Q1 '19

Eugene,

Please review and approve the HF / PE validation review for Q1 '19. All funds have now been closed.

The pertinent files can be found in the below location.



OTTI Reperformance

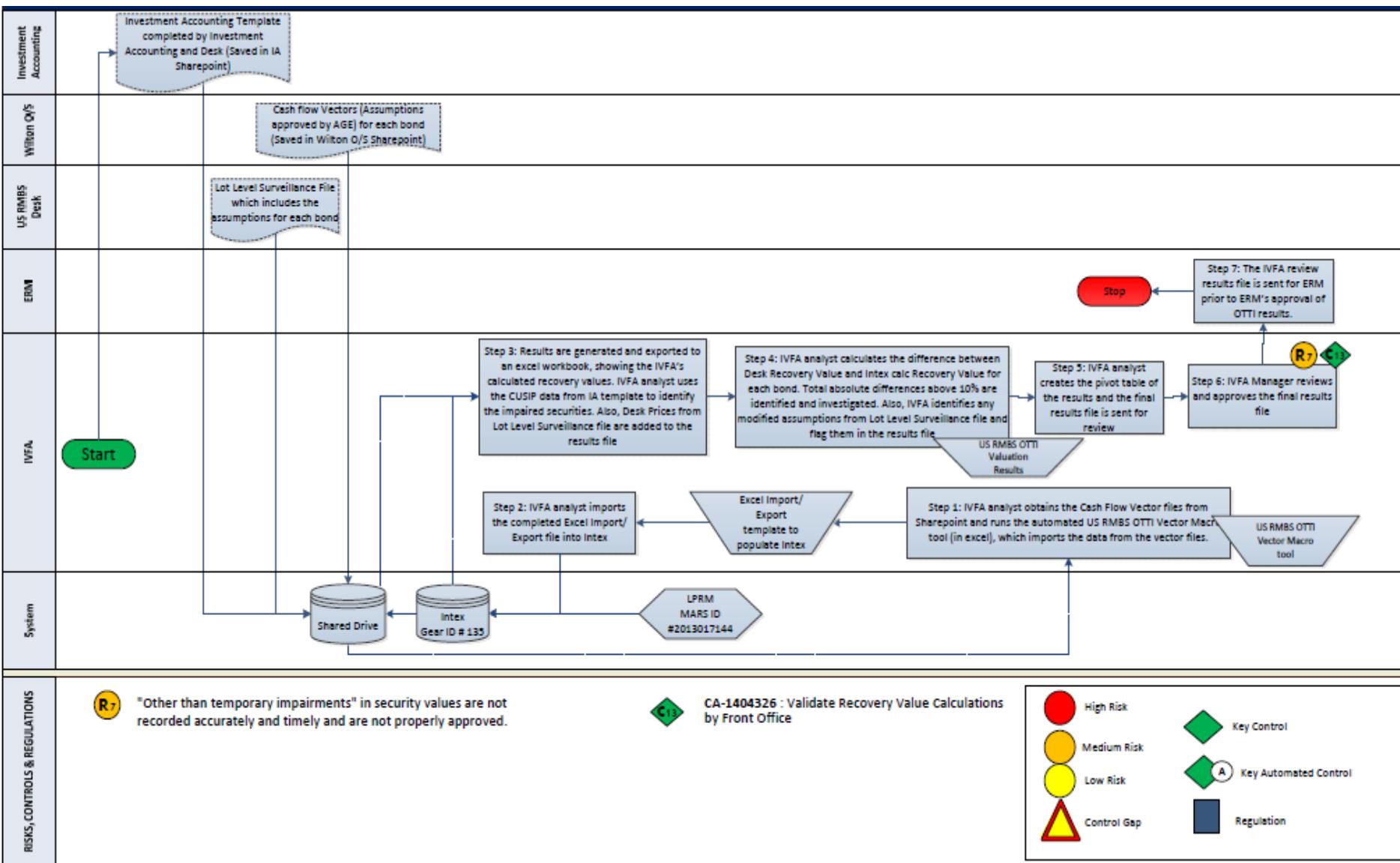
Control CA-1404326 (Risk – Medium, Frequency –Quarterly)

Description	Additional Description
Quarterly, the Independent Valuation and Financial Analytics Group (IVFA) performs an independent validation of Structured Products Desk's calculations of residual (i.e. recovery) values using AIG approved economic assumptions. The recovery values calculated by the desks are used in OTTI assessments. Differences over a defined threshold are researched and reviewed with the respective Desks for resolution as necessary. Validation results are communicated to the AIG Investments Credit Risk Group for use in their quarterly review of OTTI assessments.	Independent validation by IVFA serves as a data integrity control over the Structured Products Desk's use of EUC's in calculation of recovery values.

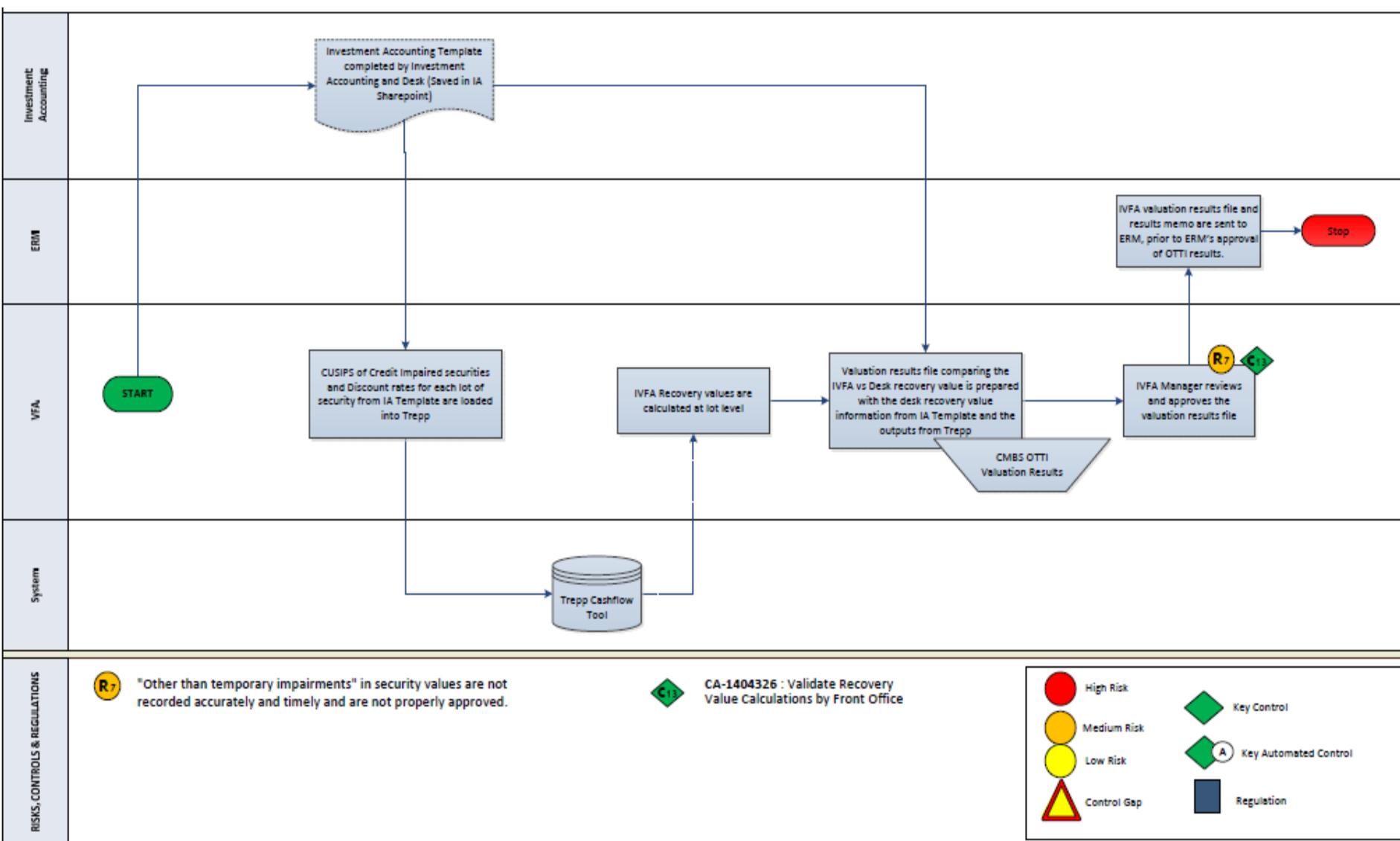
On May 8 2019, Vadim Mezrin has verified that this control description is accurate for 2019.



RMBS OTTI validation Process Flowchart



CMBS OTTI validation Process Flowchart



CA-1404326: Review of OTTI Valuation Results - Walkthrough example

Auto Save (Off) ACROBAT Power Pivot

Q1 2019 US GAAP RMBS OTTI Valuation Results REVISED.xlsx - Excel

Hegde, Shreedhar

File Home Insert Page Layout Formulas Data Review View Help ACROBAT Power Pivot

Q52 3253011

	C	D	E	F	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1					76							9	11						
2	CUSIP	Deal Name	Key	Batch Seq. Numb.	IA Yie	Book Price	Desk Price	Intex Price	Absolute Price Diff%	GC Pri	GC Sour	Quantity	IDR Book Val	Desk Recovery Value	Intex Calc Recovery Value	Diff in Recovery Value	Absolute Recovery Value Diff%	Modified Assumptions (Y/N)?	Result
3	000780AW6	ABN AMRO 2003-03	7	12.1121	81.97	81.93	81.73	0%	86.95	IDC		286,336	234,699	234,595	234,014	582	0%	N	Less than 10%
4	00441TA1A1	ACE 2006-HE3	383	5.985	62.99	68.07	71.45	5%	75.78	IDC	7,771,840	4,895,432	5,289,973	5,552,607	(262,635)	5%	Y	Less than 10%	
5	00441TAA1	ACE 2006-HE3	384	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
6	00441TA1A1	ACE 2006-HE3	385	5.985	62.99	68.07	71.45	5%	75.78	IDC	1,459,456	919,302	993,392	1,042,712	(49,320)	5%	Y	Less than 10%	
7	00441TAA1	ACE 2006-HE3	386	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
8	00441TA1A1	ACE 2006-HE3	387	5.985	74.43	68.07	71.45	5%	75.78	IDC	8,519,886	6,341,484	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
9	00441TA1A1	ACE 2006-HE3	388	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
10	00441TAA1	ACE 2006-HE3	389	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
11	00441TA1A1	ACE 2006-HE3	390	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
12	00441TAA1	ACE 2006-HE3	391	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,223,394	5,179,862	5,597,327	5,875,221	(277,894)	5%	Y	Less than 10%	
13	00441TA1A1	ACE 2006-HE3	392	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
14	00441TA1A1	ACE 2006-HE3	393	5.985	62.99	68.07	71.45	5%	75.78	IDC	1,459,456	919,302	993,392	1,042,712	(49,320)	5%	Y	Less than 10%	
15	00441TA1A1	ACE 2006-HE3	394	5.985	62.99	68.07	71.45	5%	75.78	IDC	1,459,456	919,302	993,392	1,042,712	(49,320)	5%	Y	Less than 10%	
16	00441TAA1	ACE 2006-HE3	395	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
17	00441TA1A1	ACE 2006-HE3	396	5.985	62.99	68.07	71.45	5%	75.78	IDC	8,519,886	5,366,621	5,799,137	6,087,050	(287,913)	5%	Y	Less than 10%	
18	00441TA1A1	ACE 2006-HE3	397	5.985	62.99	68.07	71.45	5%	75.78	IDC	2,741,018	1,726,549	1,865,698	1,958,326	(92,628)	5%	Y	Less than 10%	
19	004421MR1	ACE 2005-SN1	403	20.3442	29.56	27.44	34.36	25%	87.54	IDC	2,543,000	751,791	697,781	873,827	(176,045)	25%	Y	Above 10%	
20	004421MW0	ACE 2005-SN1	404	6.0035	98.04	98.21	98.37	0%	100.92	IDC	4,776,800	4,682,974	4,691,257	4,698,724	(7,467)	0%	Y	Less than 10%	
21	004421MW0	ACE 2005-SN1	405	5.9987	98.05	98.22	98.38	0%	100.92	IDC	1,263,704	1,239,056	1,241,235	1,243,200	(1,965)	0%	Y	Less than 10%	
22	00442KAC5	ACE 2007-WM02	415	5.3918	50.38	50.55	53.95	7%	54.46	IDC	8,750,054	4,408,228	4,423,318	4,720,609	(297,291)	7%	Y	Less than 10%	
23	00442KAC5	ACE 2007-WM02	416	5.3918	50.38	50.55	53.95	7%	54.46	IDC	1,844,946	929,474	932,655	995,339	(62,684)	7%	Y	Less than 10%	
24	00442KAD3	ACE 2007-WM02	417	5.3206	50.87	51.18	54.64	7%	54.93	IDC	2,274,003	1,156,737	1,163,801	1,242,402	(78,601)	7%	Y	Less than 10%	
25	00442KAD3	ACE 2007-WM02	418	5.3206	50.87	51.18	54.64	7%	54.93	IDC	5,348,666	2,720,751	2,737,367	2,922,244	(184,877)	7%	Y	Less than 10%	
26	00442KAE1	ACE 2007-WM02	419	5.2587	51.23	51.66	55.16	7%	55.27	IDC	2,251,073	1,153,213	1,162,974	1,241,769	(78,795)	7%	Y	Less than 10%	
27	00442KAE1	ACE 2007-WM02	420	5.2587	51.23	51.66	55.16	7%	55.27	IDC	429,057	219,804	221,664	236,683	(15,018)	7%	Y	Less than 10%	
28	007034BNO	Adj Rate Mtg 2006-02	473	6.4696	88.41	90.69	84.76	7%	97.53	IDC	7,332,067	6,481,929	6,649,568	6,214,925	434,643	7%	Y	Less than 10%	
29	007034BNO	Adj Rate Mtg 2006-02	474	6.4696	84.82	90.69	84.76	7%	97.53	IDC	10,998,100	9,932,258	9,974,353	9,322,388	651,965	7%	Y	Less than 10%	
30	007036ET9	Adj Rate Mtg 2004-05	479	5.5338	98.02	96.57	96.50	0%	100.94	IDC	1,915,980	1,878,011	1,850,279	1,848,838	1,441	0%	N	Less than 10%	
31	007036ET9	Adj Rate Mtg 2004-05	480	5.488	98.14	96.71	96.63	0%	100.94	IDC	1,277,320	1,253,518	1,235,244	1,234,324	920	0%	N	Less than 10%	
32	007036KG0	Adj Rate Mtg 2005-04	486	4.4939	95.90	94.24	96.67	3%	97.26	IDC	2,605,467	2,498,717	2,455,330	2,518,620	(63,290)	3%	Y	Less than 10%	
33	007036KG0	Adj Rate Mtg 2005-04	487	4.4939	95.90	94.24	96.67	3%	97.26	IDC	6,079,217	5,880,140	5,728,908	5,876,581	(147,673)	3%	Y	Less than 10%	
34	007036LR5	Adj Rate Mtg 2005-05	488	6.2388	80.26	80.08	81.58	2%	80.02	IDC	2,467,426	1,980,383	1,976,033	2,012,911	(36,878)	2%	Y	Less than 10%	
35	007036LR5	Adj Rate Mtg 2005-05	489	6.4131	79.96	79.58	81.06	2%	80.02	IDC	2,819,912	2,254,764	2,244,063	2,285,710	(41,647)	2%	Y	Less than 10%	
36	007036LR5	Adj Rate Mtg 2005-05	490	6.2388	80.08	81.58	2%	80.02	IDC	4,582,354	3,501,519	3,669,769	3,738,256	(68,488)	2%	Y	Less than 10%		
37	007036LR5	Adj Rate Mtg 2005-05	491	6.4131	81.07	79.58	81.06	2%	80.02	IDC	4,229,868	3,429,352	3,366,095	3,428,566	(62,471)	2%	Y	Less than 10%	
38	007036QE9	Adj Rate Mtg 2005-08	492	6.782	90.90	90.11	87.86	3%	91.60	IDC	4,377,718	3,979,471	3,944,937	3,846,108	98,829	3%	N	Less than 10%	
39	007036QE9	Adj Rate Mtg 2005-08	493	6.782	89.55	90.11	87.86	3%	91.60	IDC	2,357,233	2,110,964	2,124,197	2,070,981	53,216	3%	N	Less than 10%	
40	007036RU2	Adj Rate Mtg 2005-09	496	5.7363	80.94	94.23	95.25	1%	95.05	IDC	5,829,011	4,717,963	5,492,386	5,552,020	(59,635)	1%	N	Less than 10%	
41	007036RU2	Adj Rate Mtg 2005-09	497	5.7363	80.94	94.23	95.25	1%	95.05	IDC	5,829,011	4,717,963	5,492,386	5,552,020	(59,635)	1%	N	Less than 10%	

CA-1404326: Review of OTTI Valuation Results - Walkthrough example

RE: Q1 2019 GAAP RMBS OTTI Results - REVISED - Message (HTML)

File Message Help Tell me what you want to do

Wed 5/1/2019 9:56 AM

Mezrin, Vadim

RE: Q1 2019 GAAP RMBS OTTI Results - REVISED

To Horsford, Colin

OTTI

Approved

From: Horsford, Colin
Sent: Wednesday, May 01, 2019 9:56 AM
To: Mezrin, Vadim
Subject: RE: Q1 2019 GAAP RMBS OTTI Results - REVISED

Vadim,

Attached are the revised Q1 2019 GAAP RMBS OTTI Results.

From: Horsford, Colin
Sent: Wednesday, April 03, 2019 2:53 PM
To: Mezrin, Vadim
Subject: Q1 2019 GAAP RMBS OTTI Results

Vadim,

Attached are the Q1 2019 GAAP RMBS OTTI Results.

Thanks
Colin Horsford
AIG
Independent Valuation & Financial Analytics
80 Pine Street, 5th Floor, New York, NY 10005
Tel +1 212 770 8685 | Fax: 1 855 214 9438
colin.horsford@aig.com www.aig.com

CA-1404326: Review of OTTI Valuation Results - Walkthrough example

FW: Q1 2019 GAAP RMBS OTTI Results - REVISED - Message (HTML)

Tue 5/7/2019 11:41 AM

Mezrin, Vadim

FW: Q1 2019 GAAP RMBS OTTI Results - REVISED

To Naranjo, David

 Q1 2019 US GAAP RMBS OTTI Valuation Results REVISED.xlsx
xlsx File

David, please see revised GAAP OTTI.

From: Horsford, Colin
Sent: Wednesday, May 01, 2019 9:56 AM
To: Mezrin, Vadim
Subject: RE: Q1 2019 GAAP RMBS OTTI Results - REVISED

Vadim,

Attached are the revised Q1 2019 GAAP RMBS OTTI Results.

From: Horsford, Colin
Sent: Wednesday, April 03, 2019 2:53 PM
To: Mezrin, Vadim
Subject: Q1 2019 GAAP RMBS OTTI Results

Vadim,

Attached are the Q1 2019 GAAP RMBS OTTI Results.

Thanks
Colin Horsford
AIG
Independent Valuation & Financial Analytics

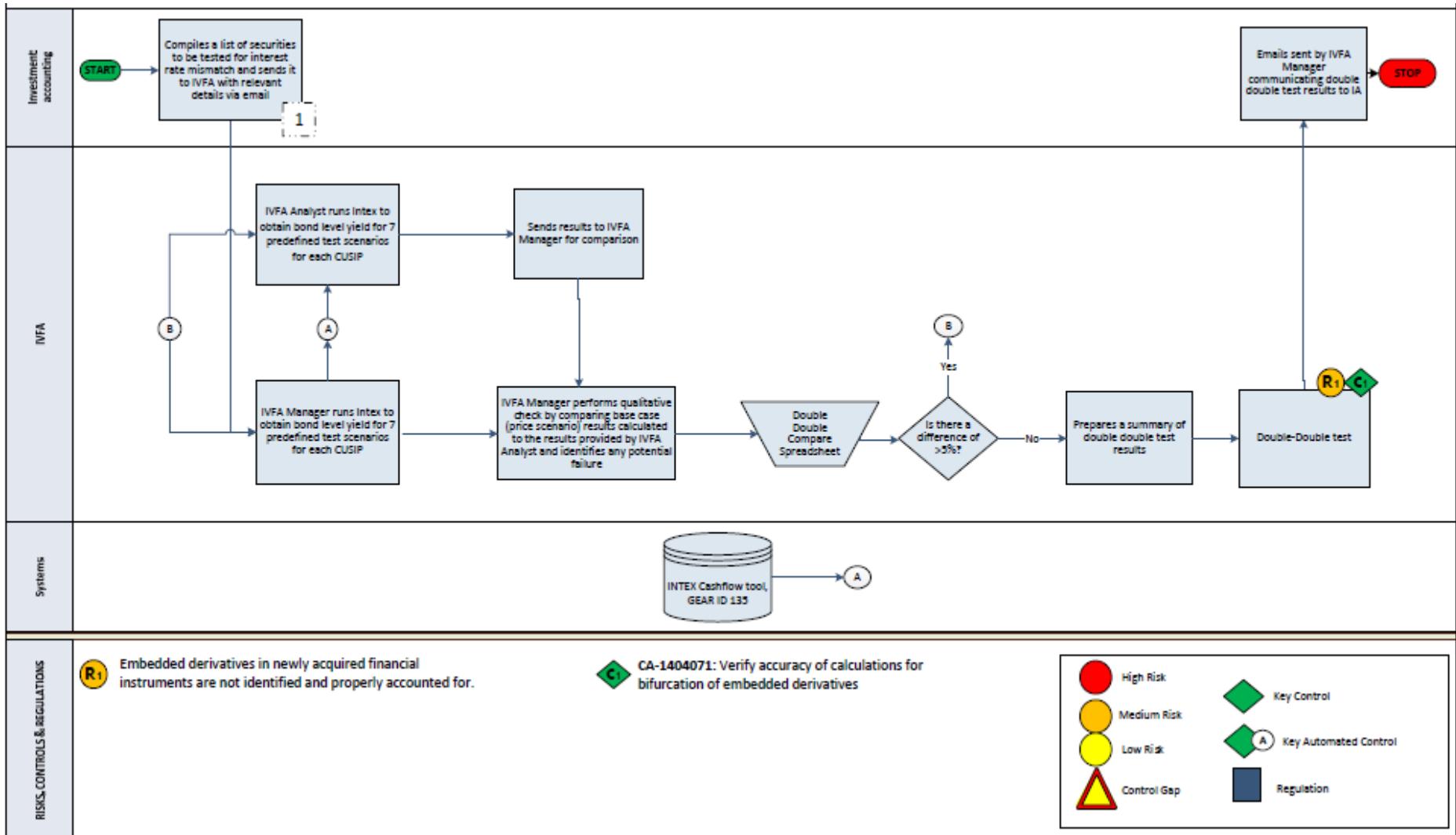
Double-Double Test

Control CA-1404071 (Risk – Medium, Frequency –As Needed)	
Description	Additional Description
As needed, two Independent Valuation and Financial Analytics (IVFA) team members independently perform interest rate double double test for "High Risk Securities" identified by Investment Accounting with a feature that would potentially be considered bifurcatable embedded derivatives. The results of the calculations are independently compared by one of the test performers and submitted to Investment Accounting via email.	

On May 8 2019, Vadim Mezrin has verified that this control description is accurate for 2019.



Double-Double Test Process Flowchart



CA-1404071: Double-Double Test - Walkthrough Example

The testing process is initiated by IA sending a request to IVFA team.

The request contains the Security identifier, date of purchase, purchase price and yield.

From: Oza, Marilyn
To: Mezrin, Vadim; Chudy, Jeff
Cc: Fung, Jeffrey; Yu, Connie; Shetty, Devika
Subject: FW: ED review Sept 2018

Sent: Mon 10/1/2018 3:09 PM

Message Sep 2018 ED analysis.xlsx (41 KB)

Hi Vadim and Jeff –
Apologies for the multiple emails, but just wanted to see if it would be possible to get a follow up on the below by today?

We need to get an answer to investment accounting ASAP.

Sorry for the last minute rush.

From: Oza, Marilyn
Sent: Monday, October 01, 2018 12:32 AM
To: Chudy, Jeff <Jeff.Chudy@aig.com>; Mezrin, Vadim <Vadim.Mezrin@aig.com>
Cc: Shetty, Devika <devika.shetty@aig.com>
Subject: ED review Sept 2018

Hi Jeff and Vadim –
Hope all is well. Can you confirm that the attached RMBSS have a potential embedded derivative? Attached is the template.

Please let us know if you have any questions.

CA-1404071: Double-Double Test - Walkthrough Example

Sep 2018 ED analysis1 [Protected View] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat

i Protected View This file originated as an e-mail attachment and might be unsafe. Click for more details. **Enable Editing**

E1 fx

#	Purchase Date	CUSIP	Security Desc	Purchase Price	ield (Yield to Maturity)	DM
1	9/26/2018	US84751WAE49	Specialty Underwriting & Resid SER 2006-BC3CL A2D	68.375	4.4342	Not available
2	9/26/2018	US84751WAE49	Specialty Underwriting & Resid SER 2006-BC3CL A2D	68.375	4.4342	Not available
3						
4						
5						

Please provide all of the following details to request a double double test:

Sheet1 Screening Report for Embedded D Sheet2 Sheet3

CA-1404071: Double-Double Test - Walkthrough Example

IVFA analysts utilize Intex pricing engine

The screenshot shows the INTEXcalc software interface in Local Mode, 64-bit. The main window title is "INTEXcalc (Local Mode, 64-bit) - [Specialty Underwriting and Residential Finance Trust, Series 2006-BC3 -- SURF06B3]". The menu bar includes File, Edit, Layout, Reports, Tools, Add-Ins, Help, and Vadim Mezrin - AIG PROCUREMENT SERVICES, INC. - ENTERPRISE RISK MANAGEMENT. A search bar at the top right says "Enter search terms (Ctrl+H)".

The left sidebar contains a navigation tree with categories: Deal/Tranche ID (US84751WAE49), Settle Date (T+3), Load, SURF06B3 (Quick Summary, Deal Detail, Tranche Detail, Tranche History, All Tranches, Structure Chart, Hedges, Tests/Triggers, Historical Info, Documents, Intex Notes), Collateral (Collat Stats, Strats, Collat Detail, Deling Roll Rates, Loan Modifications), Forecasts (Scenarios, Asset Forecasts, Script Model Builder), Reports (Price/Yield, Deal Price/Yield, Cashflows, Deal Cashflows, Graphical Waterfall, Forecasted Triggers, Asset Cashflows, Horizon Return, Decrement Tables, WAL Report, Cashflow Events), and Other.

The main content area displays the "Scenarios (Default)" window. It shows a table for "Assumption Item" across "Units" and "Scenario 1" through "Scenario 9". The table includes columns for "Yield Curves" and "Update". Key entries include:

Assumption Item	Units	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9
LIBOR (1mo)	Percent	2.287	2.372	2.5...						
LIBOR (6mo)	Percent	2.729	2.818	2.8...						
LIBOR (1yr)	Percent	3.031	3.119	3.1...						
Prepay	CPR	0								
Default	CDR	0								
Severity	Percent	100								
Recovery Lag	Months	0								
Delinquency (Entire Balance)	Percent (Current Balance)	0								
Rate Modification	Subtract	0								
Balance Forgiveness Rate	Current Balance	0								
Subsequent Recoveries	Months / Date	0								
Optional Redemption	Amount (Current Balance)	0								
Asset Level	Manual	0								
Solver	WAL	0								
P/Y Analytics	Calc	A2D	Price	100.0						
			Yield							
			DM (LIBOR (1mo))							
			WAL							

The bottom navigation bar includes tabs: Quick Summary, Collat Stats, All Tranches, Tranche Detail, Scenarios (active), Tree Model Builder, Price/Yield, and Cashflows. A status bar at the bottom left shows "Latest Update Sep 25, 2018" and "Collat Detail Loan Level".

CA-1404071: Double-Double Test - Walkthrough Example

From: Oza, Marilyn
To: Mezrin, Vadim; Chudy, Jeff
Cc: Fung, Jeffrey; Yu, Connie; Shetty, Devika
Subject: RE: ED review Sept 2018

Sent: Tue 10/2/2018 9:29 AM

Thanks Vadim.

From: Mezrin, Vadim
Sent: Tuesday, October 02, 2018 9:28 AM
To: Oza, Marilyn <Marilyn.Oza@aig.com>; Chudy, Jeff <Jeff.Chudy@aig.com>
Cc: Fung, Jeffrey <Jeffrey.Fung@aig.com>; Yu, Connie <Connie.Yu@aig.com>; Shetty, Devika <devika.shetty@aig.com>
Subject: RE: ED review Sept 2018

This security is only dependent on LIBOR. No rate divergence possible. **PASS**.

Vadim

Key Inventories – EUC's

Control Assessment ID	Process Owner/ Primary Contact	Name of EUT/Model
CA - 1403025	Jeff Timperman	Horizon Pricing Validation Spreadsheet
CA - 1403025	Jeff Timperman	Multisector CDO Valuation/protocol Spreadsheet
CA - 1403025	Jeff Timperman	Single Name Pricing Validation Spreadsheet
CA - 1403025	Jeff Timperman	SSCDS Executive summary (FAIR VALUE)
CA - 1404072	Jeff Timperman / Eugene Litvin	EQBc_SP
CA - 1404072	Jeff Timperman / Eugene Litvin	EQVol_SP
CA - 1404072	Jeff Timperman / Eugene Litvin	FX_01
CA - 1404072	Jeff Timperman / Eugene Litvin	FX_Vol_ATM
CA - 1404072	Jeff Timperman / Eugene Litvin	IR_01_FLEX
CA - 1404072	Jeff Timperman	Swaption_USD_EUR
CA - 1404071	Vadim Mezrin	Double Double Test Compare
CA - 1404695	Colin Horsford / Vadim Mezrin	CDO Price Exception Validation Analysis
CA - 1404695	Colin Horsford / Vadim Mezrin	CLO Valuation
CA - 1404695	Jeff Timperman / Vadim Mezrin	CMBS Price Exception Validation Analysis
CA - 1404695	Alex Isakov / Bella Jiang	Internal Priced Private Placement Structured Price Exception Validation Analysis
CA - 1404695	Chelsea Yang / Bella Jiang	Price Exception for Desk Review
CA - 1404695	Alex Isakov / Bella Jiang	Price Exception for Desk Review for Private Placement
CA - 1404695	Colin Horsford / Vadim Mezrin	RBMS Exceptions
CA - 1404695 & CA - 1404073	Alex Isakov / Bella Jiang	Markit Spread Computation
CA - 1405219	Jeff Timperman	NAV Valuation MS CDO

Key Inventories – Models

Control Number	Model Id	Model Name
CA-1405218, CA-1405219	201502280	CDS on CLO and ABS CDO
CA-1404073	2018031471	Black Scholes Option Pricing Model
CA-2614076	2017101419	Issue Rating Adjustment Model

Key Inventories – Key Reports

Control Assessment ID	Report Name	Description of Nature/Usage	Report Risk Rating	Input Source (i.e. system feeding this report)	Describe How Report is Generated(i.e. Microstrategy, Canned Report, Query, etc.)	Report Format
CA-1405168; CA-1405169	Investran (IDR) Holding Report	Report sent to IVFA from AEEM that contains both the hedge fund and private equity holdings. It is used by IVFA as the starting population for the quarterly HF and PE control.	Low	Investran	Query	MS Excel
CA-2614076	IDR Ratings Report	Microstrategy report used by IVFA to run the Rating Adjustment Model. It contains a list of all securities and the associated ratings.	Low	IDR	Microstrategy	MS Excel
CA-1404692	Unadjusted to Adjusted Data Mart Reconciliation	Reconciliation of Market Value between unadjusted data mart and adjusted data mart	Medium	IDR	Query	MS Excel
CA-1404693	Consolidated price exception report	To obtain a unique final set of securities by eliminating duplicates using a preference rule that selects a security based on the exception type.	Medium	IDR	Query	MS Excel
CA-1404695	CDO Vector Population	Used to populate CDO vectors used for CDO analysis	Low	CoreLogic	Canned Report	MS Excel
CA-1404695	CDO Collateral Details	Used to populate CDO yields	Low	Intex	Query	MS Excel
CA-1404693	Clearwater Multisource pricing file	File contains alternate prices for the bonds and equity portfolio for any given as-of date. This is used as an input to the Excel EUC (Exception Generation tool) as well as for the stored procedures.	Medium	Clearwater	CW sent through SFTP or IVFA Downloaded from the Clearwater website	Excel
CA-1404693	Balance Sheet Queries	Report run out of Microstrategy to obtain MVs of the full population of securities that make up the fair valued bond and equity balance sheet line items of AIG's GAAP consolidated balance sheet.	Medium	IDR	Microstrategy	Excel

Key Inventories – Auto Recons

Control Assessment ID	Control Name	Reconciliation Name	Description of Nature/Usage
CA-1404692	Reconcile IDR unadjusted Data Mart to adjusted Data Mart	IDR Unadjusted Datamart to Adjusted Datamart	Total market value from the IDR unadjusted data mart is reconciled to the total market value from final adjusted IDR data mart to ensure entire population of Investment Securities is captured in the price exception process.