

Introduction of the Public Credit Team

GEOFF CORNELL
Deputy Chief Investment
Officer

CHARLES BISHOP
Head of Public Credit

CHARLIE CARLTON *+P/T
London EM, HG
and HY Trading

JAYNE WINTHROP *P
London
HG and HY Portfolio
Management and
Research

CHRIS Malfant-P
US HG

MIKE McDERMOTT-P/R
Munis

KERRY O'BRIEN-P/T
EM and Sovereigns

MIKE ODELL- P/T
US HY

MILEN SHIKOV-P/T
CLOs

Sarah Collett *+P/T
Nikos Evmoropoulos *P
Sharmini Sivarajah *P
Ben Wheeler *T/P

CONOR KIRKANE *R
Head of London Research
Matthieu De Hen *R
Julia Dulneva *R
Karsten Hartmann *R
Kalvi Nadarajah *R
TBD *R

Consuela Baraona-R
Anthony Dina-R
Jim Drury-R
Michael Frenklakh-R
John Grassano-R
Ryan Horan-T
Matthew Keeler-R
Matthew Lynam-R
Patrick MacGowan-R
Chris Manni-P
Kevin McLaughlin-T
Brady McLoone-T
Matthew McNamee-R
Beth Morrow-R
Henna Nordqvist-R
Marc Sonnenblick +R
Tom Truxillo-P
TBD-R

Allen Choi-P/T
Xiaolei Guo-R
Yang Li-R
Pete Stevenson-P/T
Raymond Wu-R

DIANE TSENG-P/R/T
Head of EM Corporate
Research
Myra Chen *R
Vladimir Dorokhov *R
Chen (Jen) Liang-P/R/T
Nermis Rosario-R
Monica Sanz -R
Augusto Uribe-R
TBD - R
EM Portfolio Trading
Charlie Carlton *T+
Sovereign Research
Arne Grafweg-R
Rita Osea-R
Ning Sun-R
Yuying Wang-R/T

Amy Brown-R
Paul Cleary-R
Matthew Larrabee-R
Deanna Leighton -P
Frank McCreary-R
Jennifer Morrissey-T
Austin Nelson-R
Jason Paraschac-R
Marc Sonnenblick+R

Lining Geng-R
Tom Marx-P/T
Alex Orlando-T
TBD - R

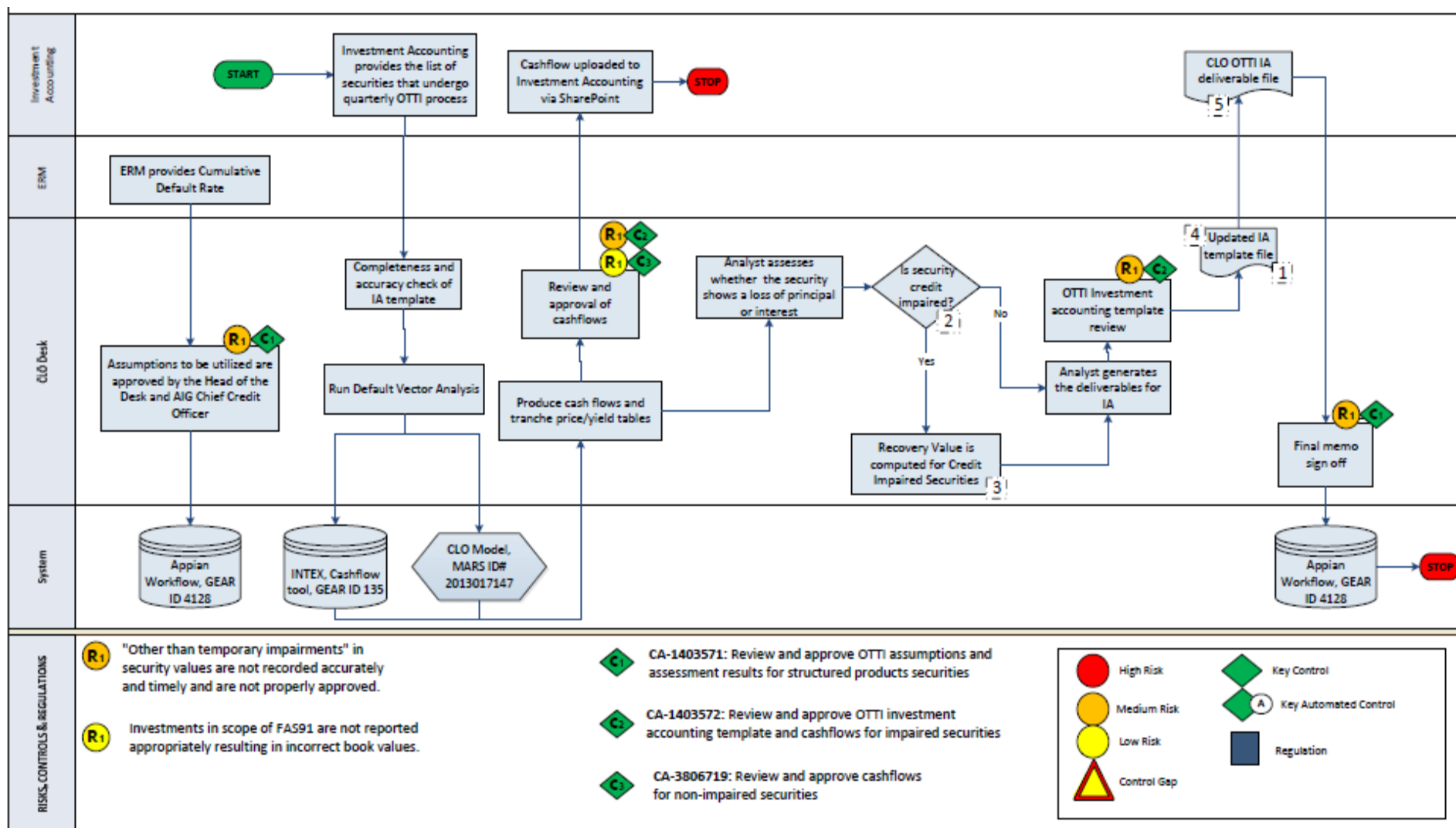
*Based in London, all other employees based in NY
> Chief Executive Officer AIG Asset Management Europe Limited (AAMEL)
P=Portfolio Manager, R=Research Analyst, T=Trader
+ Shared Resource
As of April 2019

SOX Controls – OTTI Structured Products (CLO & Ambrose)

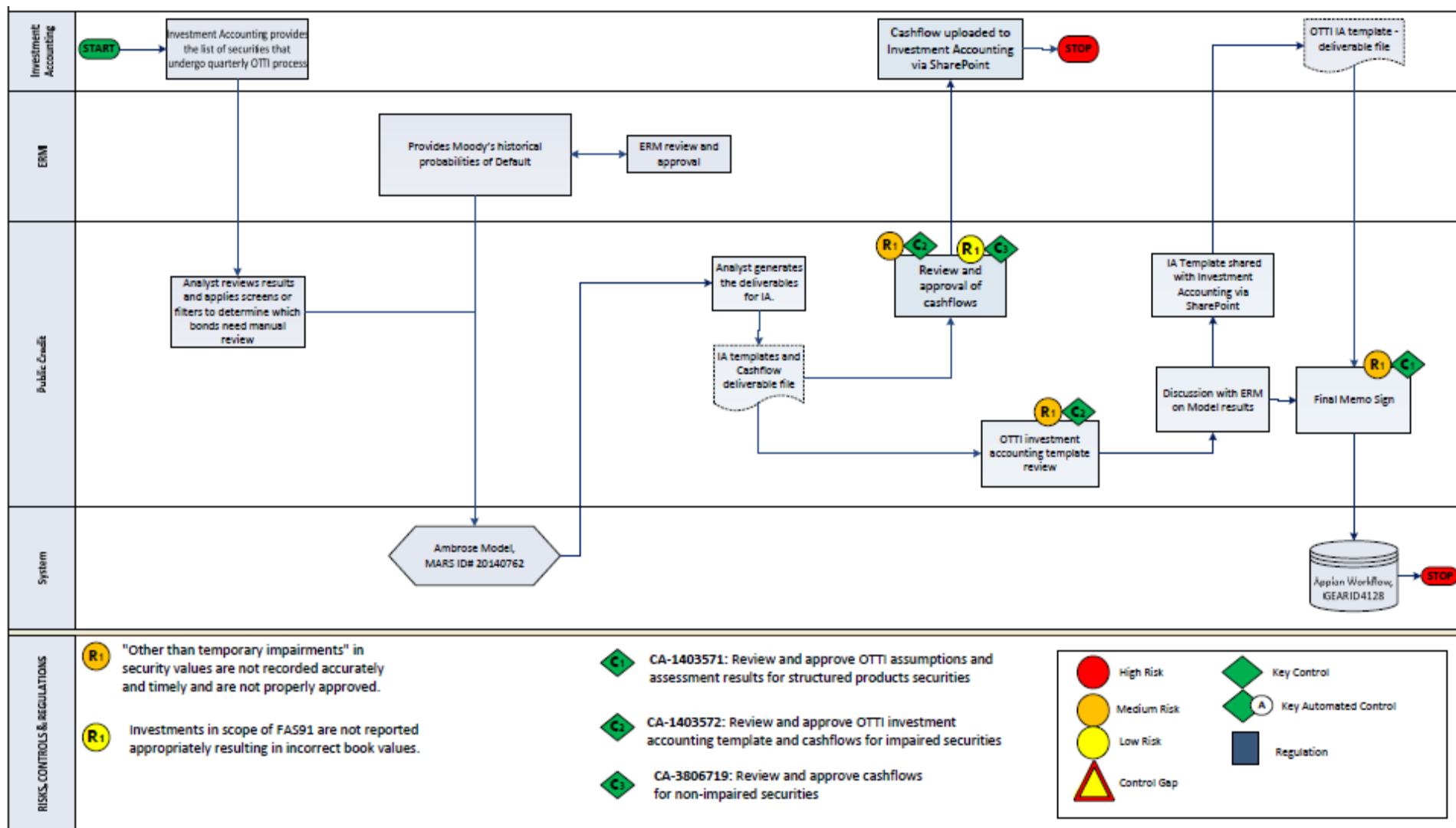
Control CA-1403571 (Risk – Medium, Frequency – Quarterly)	
Description	Additional Description
Quarterly, the Structured Product Group's Senior Management and the AIG Chief Credit Officer review and approve assumptions utilized in the structured products OTTI process contained within the OTTI memo. The OTTI memo includes results of the OTTI assessments. Approval is evidenced via sign off of the memo by the AMG Chief Credit Officer or ERM Chief Risk Officer.	
Control CA-1403572 (Risk – Medium, Frequency – Quarterly)	
Description	Additional Description
Quarterly, the Head of each Structured Products desk reviews and approves its OTTI Investment Accounting template that contains recovery values and related cash flow files prior to submission to Investment Accounting. Management review is documented via email or Appian workflow tool approval of the investment Accounting template.	
Control CA-3806719 (Risk – Medium, Frequency – Quarterly)	
Description	Additional Description
Quarterly, the Head of Structured Product desk reviews and approves the cash flows calculated for non-credit impaired securities based on the population provided by Investment Accounting. The approved cash flow file is uploaded to Investment Accounting Sharepoint. Management review is documented via email or Appian workflow tool.	

On May 7, 2019 Milen Shikov verified that the control descriptions are accurate for 2019. 

Process Flow – CLO OTTI and Cashflow review








Process Flow – Ambrose OTTI and Cashflow review



Walkthrough Sample – CLO OTTI - CA-1403572

Approval of CLO OTTI Analysis and preparer email of OTTI assessment - GAAP

From:  Shikov, Milen
To:  Leventis, Christine
Cc:  Marx, Thomas;  Geng, Lining;  Orlando, Alexander J
Subject: Re: OTTI Structured 1Q19 (GAAP) - (CLO)

Sent: Fri 3/1/2019 4:58 PM

Approved. No intent to sell.

Sent from my iPhone

On Mar 1, 2019, at 4:51 PM, Leventis, Christine <Christine.Leventis@aig.com> wrote:

Milen,

We have reviewed the [GAAP] [CLO] securities identified by Investment Accounting for possible impairment and highlighted the appropriate securities as being credit-impaired in accordance with asset class specific credit policies and procedures which are approved by AIG Credit Risk Management. Please find our 1Q 2019 credit impairment recommendations along with related recovery values and cash flows in the file(s) titled [1Q2019_OTTIEval_GAAP_FINAL] with a date/time stamp of:

[03/01/2019 4:48PM]

at the following link:

CLOs






Intent

Please advise if there is an intent to sell.

Thanks,
Christine

Walkthrough Sample – CLO OTTI - CA-1403572

Approval of CLO OTTI Analysis and preparer email of OTTI assessment - STAT

From:  Shikov, Milen
To:  Leventis, Christine
Cc:  Marx, Thomas;  Geng, Lining;  Orlando, Alexander J
Subject: Re: OTTI Structured 1Q19 (STAT) - (CLO) Sent: Fri 3/1/2019 4:58 PM

Approved. No intent to sell.

Sent from my iPhone

On Mar 1, 2019, at 4:56 PM, Leventis, Christine <Christine.Leventis@aig.com> wrote:

Milen,

We have reviewed the [STAT] [CLO] securities identified by Investment Accounting for possible impairment and highlighted the appropriate securities as being credit-impaired in accordance with asset class specific credit policies and procedures which are approved by AIG Credit Risk Management. Please find our 1Q 2019 credit impairment recommendations along with related recovery values and cash flows in the file(s) titled [1Q2019_OTTIEval_STAT_FINAL] with a date/time stamp of:

[03/01/2019 4:48PM]

at the following link:

[CLOs](#)

Intent

Please advise if there is an intent to sell.

Thanks,
Christine

Walkthrough Sample – CLO OTTI - CA-1403572

Email to Investment Accounting communicating the deliverables of Q1 2019 – GAAP/STAT

From: ☐ Leventis, Christine Sent: Fri 3/8/2019 9:37 AM
To: ☐ Kang, Samuel; ☐ Marx, Thomas; ☐ Geng, Lining; ☐ Orlando, Alexander J; ☐ Shikov, Milen; ☐ Bishop, Charles; ☐ Korrell, Thomas; ☐ Fan, Hui; ☐ Payne, Andrew; ☐ Finch, Robert Lee; ☐ Kogan, David S; ☐ Mezrin, Vadim; ☐ Horsford, Colin;
☐ Destro, Anthony; ☐ Chung, Albert
Cc:
Subject: OTTI Structured 1Q19 (GAAP) - (CLO)

Hi all,

We have reviewed the [GAAP] [CLO] securities identified by Investment Accounting for possible impairment and highlighted the appropriate securities as being credit-impaired in accordance with asset class specific credit policies and procedures which are approved by AIG Credit Risk Management. Please find our 1Q 2019 credit impairment recommendations along with related recovery values and cash flows in the file(s) titled [1Q2019_OTTIEval_GAAP_FINAL] with a date/time stamp of:

[03/01/2019 4:48PM]

at the following link:

[CLOs](#)

-

Intent

No intent to sell.

From: ☐ Leventis, Christine Sent: Fri 3/8/2019 9:39 AM
To: ☐ Shikov, Milen; ☐ Marx, Thomas; ☐ Geng, Lining; ☐ Orlando, Alexander J; ☐ Bishop, Charles; ☐ Korrell, Thomas; ☐ Kang, Samuel; ☐ Destro, Anthony; ☐ Payne, Andrew; ☐ Fan, Hui; ☐ Mezrin, Vadim; ☐ Finch, Robert Lee; ☐ Kogan, David S;
☐ Horsford, Colin; ☐ Chung, Albert
Cc:
Subject: OTTI Structured 1Q19 (STAT) - (CLO)

Hi all,

We have reviewed the [STAT] [CLO] securities identified by Investment Accounting for possible impairment and highlighted the appropriate securities as being credit-impaired in accordance with asset class specific credit policies and procedures which are approved by AIG Credit Risk Management. Please find our 1Q 2019 credit impairment recommendations along with related recovery values and cash flows in the file(s) titled [1Q2019_OTTIEval_STAT_FINAL] with a date/time stamp of:

[03/01/2019 4:48PM]

at the following link:

[CLOs](#)






-

Intent

No intent to sell.

Walkthrough Sample – CLO Cashflow review - CA-3806719

Approval of Q1'19 CLO cashflows for Non-impaired securities

From:  Geng, Lining
To:  Shikov, Milen;  Leventis, Christine
Cc:  Orlando, Alexander J;  Marx, Thomas
Subject: RE: Q4 Cash Flow Approval

Sent: Mon 3/18/2019 5:47 PM

Just to clarify, this quarter we ran all bonds for \$1mn original notional per Clearwater's request to unitize CFs. The "Balance" column shown in each CF file represents current outstanding principal balance rather than original notional. Therefore, for those amortizing bonds, current period CFs would show outstanding balances below \$1mn.

From: Shikov, Milen
Sent: Monday, March 18, 2019 5:28 PM
To: Leventis, Christine <Christine.Leventis@aig.com>
Cc: Orlando, Alexander J <Alexander.Orlando@aig.com>; Geng, Lining <Lining.Geng@aig.com>; Marx, Thomas <Thomas.Marx@aig.com>
Subject: RE: Q4 Cash Flow Approval

Approved. Thanks

From: Leventis, Christine
Sent: Monday, March 18, 2019 5:23 PM
To: Shikov, Milen <Milen.Shikov@aig.com>
Cc: Orlando, Alexander J <Alexander.Orlando@aig.com>; Geng, Lining <Lining.Geng@aig.com>; Marx, Thomas <Thomas.Marx@aig.com>
Subject: RE: Q4 Cash Flow Approval

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

Hi Milen,

As a follow-up, we confirm that cash flows have an earlier payment date shown this quarter vs last quarter as a result of higher prepayment assumptions (increased from 10% CPR to 20% CPR). Additionally, the book yields generated from the cash flows are lower quarter over quarter, as the rate curve shifted downwards. As expected, the book yields are largely in line with the market calculated yields.

The cash flows (using 1M notional for all bonds except those that have already begun amortizing down, which use a lower starting notional to account for this) can be found here:

\\pnamfsdg02.investments.aig.net\Group03\StructuredProducts\CLOs\CLOModel\CF\2018\Q4\20CPR\1M_NOTIONAL

Let me know if further questions.

Christine

Walkthrough Sample – CLO OTTI - CA-1403572

Example of Investment Accounting Template Q1 2019 – CLO GAAP – Extract

1Q2019_OTTIEVal_GAAP_FINAL - Microsoft Excel																								
File Home Insert Page Layout Formulas Data Review View Acrobat																								
A1 Batch Seq #																								
Batch Seq #	Concatenation	Record Control	Acting System Primary ID	Security Desc	GL Group	Accounting syspo rtfolio	Accounting syspo rtfolio name	Portfolio	Lot Number	GAAP FL	STAT FL	Is AIG Manage	Trading Portfolio	Current QTR Front Office Desk	Current Quarter Comment/Rank	Prev QTR Front Office Desk	Prev QTR Front Office Desk	Sec+Port Cr Imprmnt GAAP	Sec+Port Cr Imprmnt GAAP	Is Navig				
1	30	00107UAA3AIG-AMBRA-1-4	13130223	00107UAA3	Acis CLO	0	128592	AIG-AMB	AIG-AMB	182752582	Y	N	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
2	74	00163GAR8AIG-VALIC-23460	13130380	00163GAR8	ALM Loan	0	129692	AIG-VALI	AIG-VALI	182735626	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
3	75	00163GAS6AIG-VALIC-23460	13130381	00163GAS6	ALM Loan	0	129692	AIG-VALI	AIG-VALI	182735543	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
4	76	00163GAS6AIG-NUF-10118-N	13130382	00163GAS6	ALM Loan	0	129318	AIG-NUF	AIG-NUF	182739361	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
5	77	00163KAS7AIG-USL-23539-U	13130383	00163KAS7	ALM Loan	0	129544	AIG-USL	AIG-USL	182728803	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
6	78	00163KAS7AIG-USL-23539-U	13130384	00163KAS7	ALM Loan	0	129544	AIG-USL	AIG-USL	182728902	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
7	79	00163KAS7AIG-LEX-10104-LE	13130385	00163KAS7	ALM Loan	0	129211	AIG-LEX-1	AIG-LEX-1	182719902	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
8	80	00163KAU2AIG-VALIC-23460	13130386	00163KAU2	ALM Loan	0	129692	AIG-VALI	AIG-VALI	182735498	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
9	81	00163KAU2AIG-LEX-10104-LE	13130387	00163KAU2	ALM Loan	0	129211	AIG-LEX-1	AIG-LEX-1	182719817	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
10	173	00176PAE2AIG-USL-23539-U	13130480	00176PAE2	American	0	129488	AIG-USL	AIG-USL	182741632	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
11	174	00176PAE2AIG-AIRCO-10050	13130481	00176PAE2	American	0	128453	AIG-AIRO	AIG-AIRO	181847163	Y	N	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
12	175	00176PAE2AIG-LEX-10104-LE	13130482	00176PAE2	American	0	129211	AIG-LEX-1	AIG-LEX-1	182719591	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
13	176	00176PAE2AIG-AH PC-10029	13130483	00176PAE2	American	0	129004	AIG-AH P	AIG-AH P	222535237	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
14	177	00176PAE2AIG-ICAN-10076-C	13130484	00176PAE2	American	0	128473	AIG-ICAN	AIG-ICAN	182746901	Y	N	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
15	349	00439YAE6AIG-USL-23539-U	13130825	00439YAE6	Accunia	0	129488	AIG-USL	AIG-USL	182741628	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
16	350	00439YAE6AIG-NUF-10118-N	13130826	00439YAE6	Accunia	0	129318	AIG-NUF	AIG-NUF	182739349	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
17	737	020053AW4AIG-AIRCO-10050	13131483	020053AW4	ALM Loan	0	128453	AIG-AIRO	AIG-AIRO	181847129	Y	N	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
18	738	020053AW4AIG-USL-23539-U	13131484	020053AW4	ALM Loan	0	129488	AIG-USL	AIG-USL	182741620	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
19	739	020053AW4AIG-NUF-10118-N	13131485	020053AW4	ALM Loan	0	129318	AIG-NUF	AIG-NUF	182739352	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
20	1691	03328QAQ4AIG-AGL-23455-A	13132847	03328QAQ4	Anchorag	0	130517	AIG-AGL	AIG-AGL	182773247	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
21	1692	03328QAQ4AIG-LEX-10104-LI	13132848	03328QAQ4	Anchorag	0	131068	AIG-LEX-1	AIG-LEX-1	184510680	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
22	1693	03328QAQ4AIG-AH PC-10029	13132849	03328QAQ4	Anchorag	0	129004	AIG-AH P	AIG-AH P	182028068	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
23	1694	03328QAQ4AIG-NUF-10118-N	13132850	03328QAQ4	Anchorag	0	129318	AIG-NUF	AIG-NUF	182739308	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
24	1695	03328TAW5AIG-AGL-23455-A	13132851	03328TAW5	Anchorag	0	130517	AIG-AGL	AIG-AGL	182773162	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
25	1696	03328TAW5AIG-ICAN-10076-C	13132852	03328TAW5	Anchorag	0	128473	AIG-ICAN	AIG-ICAN	182746822	Y	N	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
26	1697	033296AA2AIG-AGL-23455-A	13132853	033296AA2	Anchorag	0	128859	AIG-AGL	AIG-AGL	182763232	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
27	1698	033296AA2AIG-AGL-23455-A	13132854	033296AA2	Anchorag	0	130517	AIG-AGL	AIG-AGL	182773423	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
28	1699	033296AA2AIG-AGL-23455-A	13132855	033296AA2	Anchorag	0	130517	AIG-AGL	AIG-AGL	182773400	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
29	1700	033296AA2AIG-NUF-10118-N	13132856	033296AA2	Anchorag	0	129318	AIG-NUF	AIG-NUF	182739340	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
30	1701	033296AA2AIG-NUF-10118-N	13132857	033296AA2	Anchorag	0	129318	AIG-NUF	AIG-NUF	182739330	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
31	1702	03330FAA2AIG-AGL-23455-A	13132858	03330FAA2	Anchorag	0	130517	AIG-AGL	AIG-AGL	182772139	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
32	1703	03330FAA2AIG-AGL-23455-A	13132859	03330FAA2	Anchorag	0	130517	AIG-AGL	AIG-AGL	182772139	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						
33	1704	03330FAA2AIG-AGL-23455-A	13132860	03330FAA2	Anchorag	0	130517	AIG-AGL	AIG-AGL	182772139	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired	CDO	Not Credit Impaired						

Walkthrough Sample – CLO OTTI - CA-1403572

Example of Investment Accounting Template Q1 2019 – CLO STAT – Extract

1Q2019_OTTIEVal_STAT_FINAL - Microsoft Excel																									
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A1		Batch Seq #																							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	CL	CM	CN	CO	CP	CQ	CR		
	Batch Seq #	Concatenation	Record Control #	Acting System Primary ID	Security Desc	GL Group	Accounting Portfolio ID	Accounting Portfolio Name	Portfolio	Lot Number	Quantity	Orig Par Value USD	Book Value USD GAAP	Market Value USD GAAP	USD GAAP Unrealized Gain/Loss	MVvsBV pct.	GAAP FLG	STAT_FLG	Is AIG Managed	Trading Portfolio	Current QTR Front Office Desk	Current Quarter Comment/Rank			
2	349	00439YAE6AIG-USL-23539	1.3E+07	00439YAE	Accunia t	0	129488	AIG-USL-	AIG-USL-	182741628	8750000	8750000	10252328	1E+07	-213456	97.918	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
3	350	00439YAE6AIG-NUF-10118	1.3E+07	00439YAE	Accunia t	0	129318	AIG-NUF-	AIG-NUF-	182739349	3750000	3750000	4247626.6	4302374	54747	101.289	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
4	739	020053AW4AIG-NUF-1011	1.3E+07	020053AW	ALM Loan	0	129318	AIG-NUF-	AIG-NUF-	182739352	4000000	4000000	4000000	4001538	1537.6	100.038	Y	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
5	860	02336TAC1AIG-VALIC-234	1.3E+07	02336TAC	AMBROS	0	129728	AIG-VALI	AIG-VALI	182735209	8.6E+08	1.2E+09	873085578	9.3E+08	5.9E+07	106.811	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
6	861	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768630	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
7	862	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182772741	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
8	863	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771859	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
9	864	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771152	259590	7582857	268883.92	265119	-3765.09	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
10	865	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771297	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
11	866	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182770825	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
12	867	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768306	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
13	868	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768718	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
14	869	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182772521	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
15	870	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768155	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
16	871	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768647	265882	7766667	275401.72	271545	-3856.36	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
17	872	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182767766	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
18	873	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771583	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
19	874	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182767806	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
20	875	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182770852	246483	7200000	255308.02	251733	-3574.99	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
21	876	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182769224	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
22	877	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182772603	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
23	878	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771839	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
24	879	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182770154	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
25	880	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182769273	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
26	881	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182770775	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
27	882	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771357	259590	7582858	268883.95	265119	-3765.09	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
28	883	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182769372	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
29	884	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771473	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
30	885	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182771072	259590	7582857	268883.92	265119	-3765.09	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
31	886	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768606	265882	7766667	275401.72	271545	-3856.36	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
32	887	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768221	263240	7689500	272665.42	268847	-3818.04	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			
33	888	02336VAA0AIG-AGL-2345	1.3E+07	02336VA	AMBROS	0	128804	AIG-AGL-	AIG-AGL-	182768345	275876	8058600	285753.5	281752	-4001.31	98.5997	N	Y	Yes	Structured Credit	CDO	Not Credit Impaired			

Walkthrough Sample – CLO OTTI - CA-1403572

Example of Investment Accounting Template Q1 2019 – CLO PC International – Extract

1Q2019_OTTIEVal_PC Intl_FINAL - Microsoft Excel																
File Home Insert Page Layout Formulas Data Review View Acrobat																
A1 Batch Seq #																
Batch Seq #	Concatenated	Record Control #	Acting System Primary ID	Security Desc	GL Gro	Accounting sysportfoli oID	Accountingsysportfolioname	Portfolio	Lot Number	GAAP FL	STAT FL	Is AIG Manage	Trading Portfoli o	Current QTR Front Office Desk	Current Quarter Comment/Rank	
172	00176PAA0AIG-A	13130479	00176PAA	American	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550867	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
348	00439YAB2AIG-A	13130824	00439YAE	Accunia f	0	132440	AIG-AHA JPN-48233-117606	AIG-AHA JPN-48233-AHA90	190538941	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
467	006278AS4AIG-A	13130985	006278AS	Adams M	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550864	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
736	020053AS3AIG-A	13131482	020053AS	ALM Loar	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550865	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
1690	03328QAN1AIG-A	13132846	03328QAI	Anchorag	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550862	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
2220	04966HAE6AIG-A	13133721	04966HAE	Atrium Cl	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550911	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
3372	08180NAN4AIG-A	13135694	08180NAI	Benefit S	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550861	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
3432	09626UAL2AIG-A	13135844	09626UAL	Bluemou	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550858	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
3927	12551MAC3AIG-A	13136757	12551MAI	CIFC Func	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550904	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
4810	14311DAY2AIG-A	13138212	14311DAI	Carlyle G	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550854	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
12195	38136MAC2AIG-A	13158494	38136MAI	GoldenTi	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550903	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
14220	48251JAC7AIG-A	13162278	48251JAC	KKR Final	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550849	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
15542	55818YBE0AIG-A	13164527	55818YBE	Madison	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550847	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
15547	55819BAL4AIG-A	13164532	55819BAL	Madison	0	132455	AIG-AHA JPN-48233-122800	AIG-AHA JPN-48233-AHA90	190538974	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
15548	55819BAL4AIG-A	13164533	55819BAL	Madison	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550844	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
15557	55819YAA8AIG-A	13164543	55819YAA	Madison	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550845	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
16902	64131QAA8AIG-A	13167415	64131QAI	Neubergr	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550905	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
16904	64131QAC4AIG-A	13167417	64131QAI	Neubergr	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550907	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
20418	817176AL4AIG-A	13174482	817176AL	Seneca P	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550843	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
21701	87244DAM6AIG-A	13176627	87244DAI	Wind Riv	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550838	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
23944	92916QAA0AIG-A	13180727	92916QAI	Voya CLO	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550910	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
23945	92916QAA0AIG-A	13180728	92916QAI	Voya CLO	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	192748273	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
23948	92916QAC6AIG-A	13180731	92916QAI	Voya CLO	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550908	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
24670	95753TAB1AIG-A	13181889	95753TAE	Westcott	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550839	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
26478	N31081CW5AIG-A	13185683	N31081CI	Euro Gali	0	132440	AIG-AHA JPN-48233-117606	AIG-AHA JPN-48233-AHA90	190538942	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
27310	BCC2EQE57AIG-A	13187264	BCC2EQEI	Avoca CL	0	132440	AIG-AHA JPN-48233-117606	AIG-AHA JPN-48233-AHA90	190538954	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
27583	04965CAL2AIG-A	13188058	04965CAL	Atrium Cl	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550901	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
27634	141312AA6AIG-A	13188116	141312AA	Carbone	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	192747978	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
27635	141312AA6AIG-A	13188117	141312AA	Carbone	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550909	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
27760	48250MAK3AIG-A	13188648	48250MAI	KKR Final	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550902	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
29174	48251TAB7AIG-A	13191614	48251TAE	KKR Final	0	132430	AIG-AGI-46635-117589	AIG-AGI-46635-AGI9472-US	190550906	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
30044	BCC2F4WC0AIG-A	13192949	BCC2F4WI	Carlyle G	0	132440	AIG-AHA JPN-48233-117606	AIG-AHA JPN-48233-AHA90	190538947	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		
31874	BCC2FM688AIG-A	13197733	BCC2FM6I	Toro Eurc	0	132440	AIG-AHA JPN-48233-117606	AIG-AHA JPN-48233-AHA90	190538957	Y	N	Yes	Structured Credit	PC International - CD Not Credit Impaired		

Walkthrough Sample – CLO Cashflows - CA-3806719

Example of Q1 2019 – CLO cashflows of Non-impaired securities for IA – Extract

00100VAG5_pidrubet_20190318_01_52 - Microsoft Excel

B1 CUSIP										
	A	B	C	D	E	F	G	H	I	J
1	ISIN	CUSIP	DealName-TrancheName	Date	Principal	Interest	Cash flow	Balance	Principal Writedown	Interest Shortfall
2		00100VAG5	ACIS1404-C	2/15/2019	0	0	0	1000000	0	0
3		00100VAG5	ACIS1404-C	3/1/2019	0	0	0	1000000	0	0
4		00100VAG5	ACIS1404-C	4/1/2019	0	0	0	1000000	0	0
5		00100VAG5	ACIS1404-C	5/1/2019	0	13068.78472	13068.78472	1000000	0	0
6		00100VAG5	ACIS1404-C	6/3/2019	0	0	0	1000000	0	0
7		00100VAG5	ACIS1404-C	7/1/2019	0	0	0	1000000	0	0
8		00100VAG5	ACIS1404-C	8/1/2019	0	13200.39944	13200.39944	1000000	0	0
9		00100VAG5	ACIS1404-C	9/3/2019	0	0	0	1000000	0	0
10		00100VAG5	ACIS1404-C	10/1/2019	0	0	0	1000000	0	0
11		00100VAG5	ACIS1404-C	11/1/2019	0	13243.2415	13243.2415	1000000	0	0
12		00100VAG5	ACIS1404-C	12/2/2019	0	0	0	1000000	0	0
13		00100VAG5	ACIS1404-C	1/2/2020	0	0	0	1000000	0	0
14		00100VAG5	ACIS1404-C	2/3/2020	0	13500.78251	13500.78251	1000000	0	0
15		00100VAG5	ACIS1404-C	3/2/2020	0	0	0	1000000	0	0
16		00100VAG5	ACIS1404-C	4/1/2020	0	0	0	1000000	0	0
17		00100VAG5	ACIS1404-C	5/1/2020	0	12584.00968	12584.00968	1000000	0	0
18		00100VAG5	ACIS1404-C	6/1/2020	0	0	0	1000000	0	0
19		00100VAG5	ACIS1404-C	7/1/2020	0	0	0	1000000	0	0
20		00100VAG5	ACIS1404-C	8/3/2020	0	13389.68022	13389.68022	1000000	0	0
21		00100VAG5	ACIS1404-C	9/1/2020	0	0	0	1000000	0	0
22		00100VAG5	ACIS1404-C	10/1/2020	0	0	0	1000000	0	0
23		00100VAG5	ACIS1404-C	11/2/2020	0	12860.02273	12860.02273	1000000	0	0
24		00100VAG5	ACIS1404-C	12/1/2020	0	0	0	1000000	0	0
25		00100VAG5	ACIS1404-C	1/4/2021	0	0	0	1000000	0	0
26		00100VAG5	ACIS1404-C	2/1/2021	0	12828.21664	12828.21664	1000000	0	0
27		00100VAG5	ACIS1404-C	3/1/2021	0	0	0	1000000	0	0
28		00100VAG5	ACIS1404-C	4/1/2021	0	0	0	1000000	0	0
29		00100VAG5	ACIS1404-C	5/3/2021	0	12767.13399	12767.13399	1000000	0	0
30		00100VAG5	ACIS1404-C	6/1/2021	0	0	0	1000000	0	0

00100VAG5_pidrubet_20190318_01

Walkthrough Sample – CLO OTTI - CA-1403571

Example Appian Approval of CLO OTTI Memo - Extract

Records / GDA Version 2 OTTI/ALLL Requests

10207 : Impairment Memo: All - Q1/2019 for CLO



Summary

News

Related Actions

Detail Status : Approval In Progress

Initiating

Review In-Progress

Approval In-Progress

Approved

General Information

Subject: Impairment Memo: All - Q1/2019 for CLO

Year: 2019

Quarter: Q1

Region: All

Initiator: Alexander Orlando

Second Initiator:

Request Submission Date: May 2, 2019 5:20 PM

Final Approval Due Date: May 6, 2019 11:30 PM

Asset Class: CLO

Document Type: Impairment Memo

Document Version 2 for approval

Current Document

Version #	Attachment Name	Document Type	Role	Uploaded By	Uploaded On
2	Q1_2019_OTTI_Memo FINAL updated_version2		Initiator	Alexander Orlando	5/3/2019 3:10 PM EDT

Initiator comments

Initiator	Comments	Comments made on
Alexander Orlando	Q1 '19 CLO OTTI Memo. No change in assumption other than prepayment assumption from 10 to 20 CPR. Ambrose section incorporated.	5/2/2019 5:38 PM EDT
Alexander Orlando	Q1'19 CLO OTTI Memo. No assumption change expect 10 to 20 CPR; corrected historical default rate added.	5/3/2019 3:10 PM EDT

Walkthrough Sample – CLO OTTI - CA-1403571


Example Appian Approval of CLO OTTI Memo - Extract

▼ Reviewers Completed/In-Progress

Reviewer Level	Reviewer Name	Reviewed Documents Name	Comments	Decision	Assigned On	Completed On
3	Andrew Payne	Q1_2019_OTTI_Memo FINAL updated_version2	Review complete.		5/3/2019 4:24 PM EDT	5/6/2019 10:54 AM EDT
2	Kenneth McGloin	Q1_2019_OTTI_Memo FINAL updated_version2	Review complete		5/3/2019 3:52 PM EDT	5/3/2019 4:24 PM EDT
1	Milen Shikov	Q1_2019_OTTI_Memo FINAL updated_version2			5/3/2019 3:11 PM EDT	5/3/2019 3:52 PM EDT
2	Kenneth McGloin	Q1_2019_OTTI_Memo FINAL_version1	I am returning this memo because I believe there is a meaningful typo on Page 2 - bullet #2- reads "from 2.8% to 21%" I believe that should be "2.8% to 2.1%" please correct and return in Appian- Milen will have to approve again so I can get it. ASAP please.		5/3/2019 10:14 AM EDT	5/3/2019 11:09 AM EDT
1	Milen Shikov	Q1_2019_OTTI_Memo FINAL_version1			5/2/2019 5:38 PM EDT	5/3/2019 10:14 AM EDT

5 items

▼ Approvals Completed/In-Progress

Approval Level	Approver Name	Approved Documents Name	Comments	Decision	Assigned On	Completed On
1	Milen Shikov	Q1_2019_OTTI_Memo FINAL updated_version2			5/6/2019 10:54 AM EDT	
1	Charles Bishop	Q1_2019_OTTI_Memo FINAL updated_version2			5/6/2019 10:54 AM EDT	
1	Geoffrey Cornell	Q1_2019_OTTI_Memo FINAL updated_version2			5/6/2019 10:54 AM EDT	

▼ Approvals Awaiting

Approval Level	Function	Approver Names	Due Date	All Required
2	ERM Team Member	Andrey Jiansky; Kenneth McGloin	5/6/2019 11:00 PM EDT	No
3	ERM Executive	Andrew Payne	5/6/2019 11:00 PM EDT	No

Walkthrough Sample – CLO OTTI - CA-1403571

Example of CLO OTTI Memo - Extract



Investments Memorandum

TO: Geoffrey Cornell, Charles Bishop, Milen Shikov, Andy Payne, Kenneth McGloin, Andrey Jiansky

FROM: CLO Team

DATE: April 29th, 2019

RE: AIG Investments CLO Quarterly Surveillance and OTTI Process

Summary of Q1' 2019 Impairment Recommendations:

- No securities currently impaired.
- No new securities are recommended to be impaired for Q1' 2019.
- Update from 10 CPR to 20 CPR (rationale below)

In Scope Portfolio Overview

Total Portfolio	0101 Book Value LCL	0101 Market Value LCL	0101 Total CUSIPs	1001 Book Value LCL	1001 Market Value LCL	1001 Total CUSIPs
Collateral Type	GAAP	GAAP		GAAP	GAAP	
US CLO	5,341,150,420	5,341,150,420	402	4,806,428,215	4,795,730,512	270
Euro CLO	1,276,446,357	1,276,446,357	95	1,226,402,662	1,223,530,104	50
Modest Market	235,950,000	235,950,000	8	235,950,000	235,885,505	8
SOLP	1,250,104,985	1,250,104,985	1	1,250,551,474	1,252,551,474	2
CDO	252,241,666	252,241,666	6	252,243,429	248,774,153	6
Amortose	6,246,151,507	6,246,151,507	14			
Grand Total	14,611,736,374	14,611,736,374	526	8,066,260,366	8,024,889,889	379

Increase for both periods in \$/CUSIP count in US CLO due to in-sourcing of Validus positions

1. CLO Impairment Process

Each quarter, the CLO team uses ERM developed default vector and applies other key input assumptions (recovery rates and prepayment rates) by assessing rating agency research, street research and current market conditions. These assumptions are approved by Enterprise Risk Management ("ERM").

Starting in Q3'17, we began to run the validated internal AIG CLO model for both the US and European portfolios. The model is based on the Intex engine and we apply the enrichment benefits for the underlying European collateral.

The default vectors and other assumptions are input into the model to produce Loss Coverage Multiple ("LCM") and cash flow summaries for the portfolio. As per the AIG Accounting Policy & Procedural, the team reviews the results to identify any newly impaired securities that show a loss of principal or interest, and submits cash flows and recovery values as applicable to Investment Accounting. The Investment Accounting team reviews: if (1) the security market value is less than its amortized cost and (2) the projected discounted cash flows (i.e. recovery value) are lower than the security's amortized cost, and then completes the OTTI process with calculations to determine the actual level of impairment, if any.

2. Q1' 2019 Default, Recovery and Prepayment Rate Assumptions

No methodology change from the previous quarter other than updated CDR curves by ERM that largely remained the same with no impact on the portfolio. Recommend change to the assumed prepayment rate for both the US and Euro portfolios to be consistent with historical prepayment rates which exceed 20% annually.

A. Default Vectors

We recommend continuing to use rating-based default vectors for each loan collateral for Q1' 2019 OTTI because it is more representative of the portfolio default risk. Since Q3 2016, ERM developed rating-based CDR vectors, reflecting both Point-In-Time credit conditions as well as long term credit mean reversion. The CDR curves are updated quarterly to reflect the updated PIT projection. The updated Q1'19 CDR curves are very much in line with the CDR curves used in Q4'18. We applied these CDR vectors for Q1'19 CLO portfolio OTTI (Appendix 8.a and 8.b.)

Recent Loan Default Trends (Chart 3) – default rates remain low compared to historical levels

- Moody's speculative-grade default rate including loans and bonds (TTM March 2019, issuer weighted):
 - U.S.: 2.40% vs. 4.20% a year ago
 - U.S. loans: 1.93% vs. 2.42% a year ago
 - U.S. HY bond: 3.65% vs. 5.65% a year ago
 - Europe: 0.90% vs. 3.10% a year ago
- S&P/LSTA TTM loan default rate through March 2019:
 - U.S.: 1.40% (issuer weighted) or 0.93% (par weighted)
 - Euro: 0.0% (issuer/par weighted)
- Default volumes moderated during the first quarter- JPM reported that 9 companies defaulted for a total of \$9.3bn in loans and bonds following 11 defaults totaling \$10.0bn during the 4th quarter.
- For loans, the JP Morgan par-weighted loan default rate ended the 1st quarter down at 1.00%, the lowest default rate since April 2012 and down ~60 bps from the end of 2018. By volume, bond defaults total \$5.9bn and loan defaults total \$3.4bn thus far in 2019.
- Due to the collateral manager's credit selection as well as their ability to actively trade into and out of credits, AIG's CLO default rate remains well below the leveraged loan market at 0.37%.
- The Euro distressed loan ratio¹ (issuer weighted) decreased during Q1 from 2.8% to 2.1%. Weaker economic data and slower Eurozone growth have led the ECB to postpone rate hikes until at least next year and initiate another round of stimulus via TLTRO ending in March 2021.

Near Term Default Rate Forecasts:

- JP Morgan is forecasting a high yield and loan default rate of 1.5% apiece for 2019, below the 3.5% long-term average, with a slight up-tick to 2.0% for 2020.
- In their quarterly survey, loan managers predict a loan default rate of 2.58% by the end of December 2020, below December's 2.79% prediction.
- Moody's 12-month U.S. issuer-weighted speculative-grade default forecast fell to 1.7% as of March for bonds and loans, vs. 2.8% as of December.
- Moody's 12-month Europe issuer-weighted speculative-grade forecast increased to 1.8% as of March for bonds and loans vs 1.3% as of December.

B. Recovery Rates (Charts 4 & 5)

I. US portfolio (Charts 4, 5):

We recommend maintaining the 65% recovery assumption on first lien senior secured loans, consistent with the long-term historic Moody's recovery rate of 67%² as well as 62% per CS research. For second lien loans, we will maintain our prior assumption of 32% recovery, considering Moody's 32% long term recovery rate.

We continue using 35% recoveries for HY bonds, below Moody's long-term senior unsecured bond recovery rate of 38% and the CS long-term recovery rate of 45%.

- Moody's compared (Chart 6) ultimate recoveries of cov-lite vs. fully covenanted loans that have defaulted. The average ultimate recovery on the 18 first lien cov-lite loans (issued between 2005 - 2014Q3) that defaulted and emerged from bankruptcy was 78.6%, close to the 81.9% on all defaulted first lien loans in the database. We use Moody's other recovery measure – trading price 30 days post default- as an indication of recovery.
- In February 2019, Moody's updated the most recent corporate default and recovery study based on 5,500 defaults (1987-2018) showing that loan recovery rates are less cyclical than firm-wide recoveries, and bond recovery rates are more cyclical. The average discounted ultimate recovery rate on loans is

¹ The share of performing loans trading below \$80

² Recovery data generally refer to loan trading price 30 days after default, if not otherwise noted – e.g. ultimate recovery is generally higher



Key Inventories

Inventory Type	Details
Systems	<ul style="list-style-type: none"> • Appian Workflow • Intex Cashflow Tool
Models	<ul style="list-style-type: none"> • CLO Model • Ambrose Model
EUCs (End User Computation)	<ul style="list-style-type: none"> • None
Key Reports	<ul style="list-style-type: none"> • None
System Interfaces	<ul style="list-style-type: none"> • None
Automated Calculation/System Functionality	<ul style="list-style-type: none"> • None
Automated Reconciliations	<ul style="list-style-type: none"> • None