DUS Disclose™ DSCR Quick Reference Guide

At-Issuance DSCR Calculations

New and updated At-Issuance DCSR Calculations

DUS and Bulk Deliveries	Description of Changes
	▪ UW NCF DSCR ▪ UW NCF DSCR IO (as applicable) ▪ UW NCF DSCR at Cap (as applicable)
Changes to Calculations for Issuance DSCR	▪ Partial Interest Only and Full Interest Loans will be calculated on Actual/360 and 30/360 basis, as applicable ▪ Coop Equivalent NCF will not be used to calculate any new At-Issuance DSCR for Coops ▪ Structured ARMs (SARMs) - UW NCF DSCR at Cap will be calculated using the Strike Rate + Mortgage Margin instead of a Variable Underwriting Rate

At Issuance DSCR fields for DUS and Bulk Delivery Securities:

At Issuance DSCR fields for DUS and Bulk Delivery Securities are located in the At Issuance DSCR & LTV section in the Loan Section of DUS Disclose.

At Issuance DSCR & LTV

UW NCF DSCR	UW NCF DSCR (I/O)	UW NCF DSCR at Cap	LTV
1.62x	2.42x	1.03x	69.50%

Credit Facility	Description of Changes
	▪ Two new fields were added for Credit Facilities - UW NCF DSCR at Facility Level and UW NCF DSCR IO at Facility Level

At Issuance DSCR fields for Credit Facility Securities:

At Issuance DSCR fields for Credit Facility Securities are located in Financials in the Deal Level section of DUS Disclose.

Financials

	Underwritten
NCF DSCR	1.59x
NCF DSCR (I/O)	

DSCR for Securities Settled Prior to DUS Disclose Implementation	Description of Changes
	▪ Issuance DSCR and DSCR at Maximum Payment fields will be populated for DUS Securities issued prior to December 1, 2017.

DSCR for Securities Settled Prior to DUS Disclose Implementation:

The Issuance DSCR field will appear in a box located after the At Issuance DSCR & LTV section in the Loan Section of DUS Disclose. DSCR at Maximum Payment is located in the Loan Detail pop-up.

Issuance DSCR
1.61x

December 2017

Ongoing DSCR Calculations

There are **no changes to Ongoing DSCR** Calculations.

Ongoing DSCR for DUS and Bulk Delivery Securities

Ongoing DSCR for DUS and Bulk Delivery Securities are located in the Current DSCR section on the Loan Section of DUS Disclose.

Current DSCR			
Q2 2017 (YTD)	2016 (Preceding)	2015 (2nd Preceding)	3rd Preceding
2.48x	2.40x	1.45x	

Ongoing DSCR for Credit Facility Securities

Ongoing DSCR for Credit Facility Securities are located in Financials in the Deal Level section of DUS Disclose.

Financials

	Underwritten	Q2 2017 (Trailing 3 Months)	Q2 2017 (Trailing 12 Months)	2016 (Preceding)	2015 (2nd Preceding)	2014 (3rd Preceding)
NCF DSCR		2.79x	2.71x	2.72x	2.72x	2.66x
NCF DSCR (I/O)						

DSCR Scenarios

DUS and Bulk Delivery Fields

Field	Definition
UW NCF DSCR	The ratio of the annualized underwritten Net Cash Flow (NCF) of a mortgaged property to the annualized principal and interest payments (for Amortizing and Partial Interest Only include Principal & Interest payments or for Full Interest Only include Interest payments) due on the related mortgage loan and any debt service on pari passu debt, other Fannie Mae mortgage loan debt and subordinate third party debt, if applicable.
UW NCF DSCR IO	For a mortgage loan with interest only, the ratio of the underwritten annualized Net Cash Flow (NCF) of a mortgaged property to the annualized interest payments due on the related mortgage loan (debt service) and any debt service on pari passu debt, other Fannie Mae mortgage loan debt and subordinate third party debt, if applicable. This field will be null for any loan that is not Interest Only.
UW NCF DSCR at Cap	For adjustable-rate mortgage loan, the ratio of the underwritten annualized Net Cash Flow (NCF) of a mortgaged property to the annualized debt service of the loan and any debt service on pari passu debt, other Fannie Mae mortgage loan debt and subordinate third party debt, if applicable. Coverage Ratio (DSCR) is calculated using the Loan Lifetime Cap Interest Rate for a capped adjustable-rate loan or the Strike Rate plus Mortgage Margin for a Structured adjustable rate loan.. This field will be null for any adjustable-rate loan without a cap or fixed rate loans.

> *DSCR are shown on a combined basis if subordinate/additional debt exists*

Fannie Mae®

Fixed Rate Scenarios

Fixed Rate Amortizing Loan.

Loan Assumptions:		A/360	30/360
UPB:	$10,000,000	**UW NCF DSCR** UW NCF/(Scheduled P&I *12)	UW NCF/(Scheduled P&I *12)
Scheduled P&I:	$53,682		
Current Interest Rate:	5.00		
UW NCF:	$1,500,000		

> **UW NCF DSCR:**
> $1,500,000 / ($53,682*12) = 2.33

Loan Assumptions with Additional Debt - Fixed Rate No IO		A/360	30/360
Additional Debt-Amortizing Payment:	$4,000	**UW NCF DSCR** UW NCF/((Scheduled P&I *12) + (Add'l Debt-Amortizing Payment * 12))	UW NCF/((Scheduled P&I *12) + (Add'l Debt-Amortizing Payment * 12))

> **UW NCF DSCR:**
> $1,500,000 / (($53,682*12) + ($4,000*12)) = 2.17

Fixed Rate Interest Only Loan.

Loan Assumptions:		A/360	30/360
UPB:	$10,000,000	**UW NCF DSCR** UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB* (Current Interest Rate/100))
Current Interest Rate:	5.00	**UW NCF DSCR IO** UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB* (Current Interest Rate/100))
UW NCF:	$1,500,000		

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100*365/360)) = 2.96

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100)) = 3.00

Loan Assumptions with Additional Debt - Fixed Rate No IO		A/360	30/360
Additional Debt-Amortizing Payment:	$4,000	**UW NCF DSCR** UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Amortizing Payment*12))	UW NCF/((UPB* (Current Interest Rate/100))+(Add'l Debt- Amortizing Payment*12))
		UW NCF DSCR IO UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Amortizing Payment*12))	UW NCF/((UPB* (Current Interest Rate/100))+(Add'l Debt- Amortizing Payment*12))

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100*365/360)) + ($4,000*12)) = 2.70

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100)) + ($4,000*12)) = 2.74

Fixed Rate Partial Interest Only Loan.

Loan Assumptions:		A/360	30/360
UPB:	$10,000,000	**UW NCF DSCR** UW NCF/(Amortizing Payment *12)	UW NCF/(Amortizing Payment *12)
Monthly Amortizing Payment:	$53,682	**US NCF DSCR IO** UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB*(Current Interest Rate/100))
Current Interest Rate:	5.00		
UW NCF:	$1,500,000		

> **UW NCF DSCR:**
> $1,500,000 / ($53,682*12) = 2.33
> **UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100*365/360)) = 2.96

> **UW NCF DSCR:**
> $1,500,000 / ($53,682*12) = 2.33
> **UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100)) = 3.00

Loan Assumptions with Additional Debt - Fixed Rate No IO		A/360	30/360
Additional Debt-Amortizing Payment	$4,000	**UW NCF DSCR** UW NCF/((Amortizing Payment *12) + (Add'l Debt- Amortizing Payment*12))	UW NCF/((Amortizing Payment*12) + (Add'l Debt- Amortizing Payment*12))
		US NCF DSCR IO UW NCF/((UPB*(Current Interest Rate/100*365/360)) + (Add' Debt-Amortizing Payment*12))	UW NCF/((UPB * (Current Interest Rate/100)) + (Add'l Debt-Amortizing Payment*12))

> **UW NCF DSCR:**
> $1,500,000 / (($53,682*12)+($4,000*12)) = 2.17
> **UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100*365/360)) +($4,000*12)) = 2.70

> **UW NCF DSCR:**
> $1,500,000 / (($53,682*12)+($4,000*12)) = 2.17
> **UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100)) + ($4,000*12)) = 2.74

December 2017

ARM Scenarios

Scenario Review: ARM Amortizing Loans

Loan Assumptions:			A/360	30/360
UPB:	$10,000,000	UW NCF DSCR	UW NCF/(Scheduled P&I *12)	UW NCF/(Scheduled P&I *12)
Scheduled P&I Payment:	$53,682	UW NCF DSCR IO	NA	NA
Amortizing Payment using Lifetime Maximum Interest Rate:	$73,376	UW NCF DSCR at Cap — Only applicable for ARM loans with Lifetime Max Interest Rate or Hedge Type is Cap	UW NCF/(Amortizing Payment using Lifetime Maximum Interest Rate *12)	UW NCF/(Amortizing Payment using Lifetime Maximum Interest Rate *12)
Current Interest Rate:	5.00			
Lifetime Max Interest Rate:	8.00			
UW NCF:	$1,500,000			

> **A/360 & 30/360**
> **UW NCF DSCR:** $1,500,000 / ($53,682*12) = 2.33
> **UW NCF DSCR at Cap:** $1,500,000 / ($73,376*12) = 1.70

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:			A/360	30/360
		UW NCF DSCR	UW NCF/((Scheduled P&I *12)+(Additional Debt-Amortizing Payment *12))	UW NCF/((Scheduled P&I *12)+(Additional Debt-Amortizing Payment *12))
Additional Debt-Amortizing Payment	$4,000	UW NCF DSCR IO	NA	NA
Additional Debt-Amortizing Payment using Lifetime Maximum Interest Rate	$5,000	UW NCF DSCR at Cap	UW NCF/((Amortizing Payment using Lifetime Maximum Interest Rate *12)+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((Amortizing Payment using Lifetime Maximum Interest Rate *12)+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate *12))

> **A/360 & 30/360**
> **UW NCF DSCR:** $1,500,000 / (($53,682*12)+($4,000*12)) = 2.17
> **UW NCF DSCR at Cap:** $1,500,000 / (($73,376*12)+($5,000*12)) = 1.60

Scenario Review: ARM Full Interest Only Loans

Loan Assumptions:			A/360	30/360
UPB:	$10,000,000	UW NCF DSCR	UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB * (Current Interest Rate/100))
Current Interest Rate:	5.00	UW NCF DSCR IO	UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB * (Current Interest Rate/100))
Lifetime Max Interest Rate:	8.00	UW NCF DSCR at Cap — Only applicable for ARM loans with Lifetime Max Interest Rate or Hedge Type is Cap	UW NCF/(UPB*(Lifetime Maximum Interest Rate/100*365/360))	UW NCF/(UPB*(Lifetime Maximum Interest Rate/100))
UW NCF:	$1,500,000			

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100*365/360))= 2.96
> **UW NCF DSCR at Cap:**
> $1,500,000 / ($10,000,000*(8.00/100*365/360)) = 1.85

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / ($10,000,000*(5.00/100))= 3.00
> **UW NCF DSCR at Cap:**
> $1,500,000 / ($10,000,000*(8.00/100))= 1.88

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:			A/360	30/360
		UW NCF DSCR	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt- Amortizing Payment *12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt- Amortizing Payment*12))
Additional Debt-Amortizing Payment	$4,000	UW NCF DSCR IO	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Interest Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt-Interest Payment*12))
Additional Debt-Interest Payment	$3,500	UW NCF DSCR at Cap — Only applicable for ARM loans with Lifetime Max Interest Rate or Hedge Type is Cap	UW NCF/((UPB*(Lifetime Maximum Interest Rate/100*365/360))+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((UPB*(Lifetime Maximum Interest Rate/100))+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))
Additional Debt-Amortizing Payment using Lifetime Maximum Interest Rate	$5,000			

> **UW NCF DSCR:**
> $1,500,000 / (($10,000,000*(5.00/100*365/360))+($4,000*12)) = 2.70
> **UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100*365/360))+($3,500*12)) = 2.73
> **UW NCF DSCR at Cap:**
> $1,500,000 / (($10,000,000*(8.00/100*365/360))+($5,000*12)) = 1.72

> **UW NCF DSCR & UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100))+($4,000*12)) = 2.74
> **UW NCF DSCR IO:**
> $1,500,000 / (($10,000,000*(5.00/100))+($3,500*12)) = 2.77
> **UW NCF DSCR at Cap:**
> $1,500,000 / (($10,000,000*(8.00/100))+($5,000*12)) = 1.74

December 2017

Scenario Review: ARM Partial Interest Only Loans

Loan Assumptions:		A/360	30/360
UPB:	$10,000,000	**UW NCF DSCR** — UW NCF/(Amortizing Payment* 12)	UW NCF/(Amortizing Payment * 12)
Amortizing Payment:	$53,682	**UW NCF DSCR IO** — UW NCF/(UPB*(Current Interest Rate/100 *365/360))	UW NCF/(UPB*(Current Interest Rate/100))
Amortizing Payment using Lifetime Maximum Interest Rate:	$73,376	**UW NCF DSCR at Cap** — Only applicable for ARM loans with Lifetime Max Interest Rate or Hedge Type is Cap — UW NCF/(Amortizing Payment using Lifetime Interest Rate *12)	UW NCF/(Amortizing Payment using Lifetime Interest Rate *12)
Current Interest Rate:	5.00		
Lifetime Max Interest Rate:	8.00		
UW NCF:	$1,500,000		

A/360:
UW NCF DSCR: $1,500,000 / ($53,682*12) = 2.33
UW NCF DSCR IO: $1,500,000 / ($10,000,000*(5.00/100*365/360)) = 2.96
UW NCF DSCR at Cap: $1,500,000 / ($73,376*12) = 1.70

30/360:
UW NCF DSCR: $1,500,000 / ($53,683*12) = 2.33
UW NCF DSCR IO: $1,500,000 / ($10,000,000*(5.00/100)) = 3.00
UW NCF DSCR at Cap: $1,500,000 / ($73,376*12) = 1.70

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:		A/360	30/360
Additional Debt-Amortizing Payment:	$4,000	**UW NCF DSCR** — UW NCF/((Amortizing Payment*12)+(Add'l Debt-Amortizing Payment*12))	UW NCF/((Amortizing Payment* 12)+(Add'l Debt- Amortizing Payment*12))
Additional Debt-Interest Payment:	$3,500	**UW NCF DSCR IO** — UW NCF/((UPB*(Current Interest Rate/100 *365/360))+(Add'l Debt-Interest Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt-Interest Payment*12))
Additional Debt-Amortizing Payment using Lifetime Maximum Interest Rate:	$5,000	**UW NCF DSCR at Cap** — Only applicable for ARM loans with Lifetime Max Interest Rate or Hedge Type is Cap — UW NCF/((Amortizing Payment using Lifetime Maximum Interest Rate *12) +(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((Amortizing Payment using Lifetime Maximum Interest Rate *12)+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))

A/360:
UW NCF DSCR: $1,500,000 / (($53,682*12)+($4,000*12)) = 2.17
UW NCF DSCR IO: $1,500,000 / (($10,000,000*(5.00/100*365/360)) +($3,500*12)) = 2.73
UW NCF DSCR at Cap: $1,500,000 / (($73,376*12)+($5,000*12)) = 1.60

30/360:
UW NCF DSCR: $1,500,000 / (($53,682*12) + ($4,000*12)) = 2.17
UW NCF DSCR IO: $1,500,000 / (($10,000,000*(5.00/100))+($3,500*12)) = 2.77
UW NCF DSCR at Cap: $1,500,000 / (($73,376*12) + ($5,000*12)) = 1.60

SARM Scenarios

Scenario Review: SARM Amortizing Loans

Loan Assumptions:		A/360	30/360
UPB:	$10,000,000	**UW NCF DSCR** — UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Structured ARM Principal Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Structured ARM Principal Payment*12))
Current Interest Rate:	5.00	**UW NCF DSCR IO** — NA	NA
Cap Strike Rate:	5.00	**UW NCF DSCR at Cap** — Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap — UW NCF/((UPB*((Cap Strike Rate/100 + Mortgage Margin/100)*365/360)) +(Structured ARM Principal Payment*12))	UW NCF/((UPB*(Cap Strike Rate/100+ Mortgage Margin/100))+(Structured ARM Principal Payment*12))
Mortgage Margin:	2.40		
Structured ARM Principal Payment:	$12,000		
UW NCF:	$1,500,000		

A/360:
UW NCF DSCR: $1,500,000 / (($10,000,000*(5.00/100*365/360)) +($12,000*12)) = 2.30
UW NCF DSCR at Cap: $1,500,000 / (($10,000,000*((5.00/100+2.40/100)*365/360))+ ($12,000*12)) = 1.68

30/360:
UW NCF DSCR: $1,500,000 / (($10,000,000*(5.00/100))+($12,000*12)) = 2.33
UW NCF DSCR at Cap: $1,500,000 / (($10,000,000*(5.00/100+2.40/100))+ ($12,000*12)) = 1.70

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:		A/360	30/360
Additional Debt-Amortizing Payment:	$4,000	**UW NCF DSCR** — UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Structured ARM Principal Payment*12) + (Add'l Debt-Amortizing Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Structured ARM Principal Payment*12) + (Add'l Debt-Amortizing Payment*12))
Additional Debt-Amortizing Payment using Lifetime Maximum Interest Rate	$5,000	**UW NCF DSCR IO** — NA	NA
		UW NCF DSCR at Cap — Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap — UW NCF/((UPB*((Cap Strike Rate/100 +Mortgage Margin Rate/100) *365/360))+(Structured ARM Principal Payment*12) + (Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((UPB*(Cap Strike Rate/100 + Mortgage Margin/100)) +(Structured ARM Principal Payment*12) + (Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))

A/360:
UW NCF DSCR: $1,500,000 /(($10,000,000*(5.00/100*365/360)) +($12,000*12)+ ($4,000*12)) = 2.15
UW NCF DSCR at Cap: $1,500,000 / (($10,000,000*((5.00/100+2.40/100)*365/360))+ ($12,000*12)+($5,000*12)) = 1.57

30/360:
UW NCF DSCR: $1,500,000 /(($10,000,000*(5.00/100))+($12,000*12)+($4,000 *12)) = 2.17
UW NCF DSCR at Cap: $1,500,000 / (($10,000,000*(5.00/100+2.40/100))+ ($12,000*12)+($5,000*12)) = 1.59

Scenario Review: SARM Full Interest Only Loans

Loan Assumptions:

UPB:	$10,000,000
Current Interest Rate:	5.00
Cap Strike Rate:	5.00
Mortgage Margin:	2.40
Structured ARM Principal Payment:	$12,000
UW NCF:	$1,500,000

	A/360	30/360
UW NCF DSCR	UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB*(Current Interest Rate/100))
UW NCF DSCR IO	UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB*(Current Interest Rate/100))
UW NCF DSCR at Cap Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap	UW NCF/(UPB*((Cap Strike Rate/100 + Mortgage Margin Rate/100)*365/360))	UW NCF/(UPB*(Cap Strike Rate/100+Mortgage Margin/100))

UW NCF DSCR & UW NCF DSCR IO:
$1,500,000 /($10,000,000*(5.00/100*365/360) = 2.96
UW NCF DSCR at Cap:
$1,500,000 /($10,000,000* ((5.00/100+2.40/100)*365/360)) = 2.00

UW NCF DSCR & UW NCF DSCR IO:
$1,500,000 / ($10,000,000*(5.00/100)) = 3.00
UW NCF DSCR at Cap:
$1,500,000 / ($10,000,000*(5.00/100+2.40/100)) = 2.03

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:

Additional Debt-Amortizing Payment:	$4,000
Additional Debt-Interest Payment:	$3,500
Additional Debt-Amortizing Payment using Lifetime Maximum Interest Rate:	$5,000

	A/360	30/360
UW NCF DSCR	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Amortizing Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt- Amortizing Payment*12))
UW NCF DSCR IO	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Interest Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt-Interest Payment*12))
UW NCF DSCR at Cap Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap	UW NCF/((UPB*((Cap Strike Rate/100 + Mortgage Margin Rate/100)*365/360))+ (Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((UPB*(Cap Strike Rate/100 + Mortgage Margin/100))+(Add'l Debt-Amortizing Payment using Lifetime Maximum Interest Rate*12))

UW NCF DSCR:
$1,500,000 /(($10,000,000*(5.00/100*365/360))+ ($4,000*12)) = 2.70
UW NCF DSCR IO:
$1,500,000 /(($10,000,000*(5.00/100*365/360))+ ($3,500*12)) = 2.73
UW NCF DSCR at Cap:
$1,500,000 / (($10,000,000*(5.00/100+2.40/100)* 365/360))+ ($5,000*12)) = 1.85

UW NCF DSCR:
$1,500,000 /(($10,000,000)*(5.00/100))+ ($4,000*12)) = 2.74
UW NCF DSCR IO:
$1,500,000 /(($10,000,000)*(5.00/100))+ ($3,500*12)) = 2.77
UW NCF DSCR at Cap:
$1,500,000 /($10,000,000*(5.00/100+2.40/100))+ ($5,000*12)) = 1.88

Scenario Review: SARM Partial Interest Only Loans

Loan Assumptions:

UPB:	$10,000,000
Current Interest Rate:	5.00
Cap Strike Rate:	5.00
Mortgage Margin:	2.40
Structured ARM Principal Payment:	$12,000
UW NCF:	$1,500,000

	A/360	30/360
UW NCF DSCR	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Structured ARM Principal Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Structured ARM Principal Payment*12))
UW NCF DSCR IO	UW NCF/(UPB*(Current Interest Rate/100*365/360))	UW NCF/(UPB*(Current Interest Rate/100))
UW NCF DSCR at Cap Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap	UW NCF/(UPB*((Cap Strike Rate/100 + Mortgage Margin Rate/100)*365/360))	UW NCF/(UPB*(Cap Strike Rate/100 + Mortgage Margin/100))

The debt calculation methodology for UW NCF DSCR at Cap uses only the interest payment for partial I/O SARMS

UW NCF DSCR:
$1,500,000 /(($10,000,000*(5.00/100*365/360)) +($12,000*12)) = 2.30
UW NCF DSCR IO:
$1,500,000 /($10,000,000*(5.00/100*365/360)) = 2.96
UW NCF DSCR at Cap:
$1,500,000 / ($10,000,000*((5.00/100+2.40/100)*365/360)) = 2.00

UW NCF DSCR:
$1,500,000 / (($10,000,000*(5.00/100))+($12,000*12)) = 2.33
UW NCF DSCR IO:
$1,500,000 / ($10,000,000*(5.00/100)) = 3.00
UW NCF DSCR at Cap:
$1,500,000 / ($10,000,000*(5.00/100+2.40/100)) = 2.03

Loan Assumptions with Additional Debt – Capped ARM Partial IO still in its interest only period:

Additional Debt-Amortizing Payment:	$4,000
Additional Debt-Interest Payment:	$3,500
Additional Debt-Current Payment using Lifetime Maximum Interest Rate:	$5,000

	A/360	30/360
UW NCF DSCR	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Structured ARM Principal Payment*12)+(Add'l Debt-Amortizing Payment *12))	UW NCF/((UPB*(Current Interest Rate/100))+(Structured ARM Principal Payment*12) +(Add'l Debt- Amortizing Payment *12))
UW NCF DSCR IO	UW NCF/((UPB*(Current Interest Rate/100*365/360))+(Add'l Debt-Interest Payment*12))	UW NCF/((UPB*(Current Interest Rate/100))+(Add'l Debt-Interest Payment*12))
UW NCF DSCR at Cap Only applicable for ARM loans with Lifetime Cap or Hedge Type is Cap	UW NCF/((UPB*((Cap Strike Rate/100 + Mortgage Margin Rate/100) *365/360))+(Add'l Debt-Current Payment using Lifetime Maximum Interest Rate*12))	UW NCF/((UPB*(Cap Strike Rate/100 + Mortgage Margin/100))+(Add'l Debt-Current Payment using Lifetime Maximum Interest Rate*12))

The debt calculation methodology for UW NCF DSCR at Cap uses only the interest payment for partial I/O SARMS

UW NCF DSCR:
$1,500,000 /(($10,000,000*(5.00/100*365/360)) + ($12,000*12)+ ($4,000*12)) = 2.15
UW NCF DSCR IO:
$1,500,000 /(($10,000,000* (5.00/100*365/360))+($3,500*12)) = 2.73
UW NCF DSCR at Cap:
$1,500,000 / ($10,000,000* ((5.00/100+2.40/100)*365/360))+ ($5,000*12)) = 1.85

UW NCF DSCR:
$1,500,000 / (($10,000,000)* (5.00/100))+($12,000*12)+ ($4,000*12)) = 2.17
UW NCF DSCR IO:
$1,500,000 / (($10,000,000)* (5.00/100))+($3,500*12)) = 2.77
UW NCF DSCR at Cap:
$1,500,000 /(($10,000,000* (5.00/100+2.40/100))+($5,000*12)) = 1.88

Credit Facilities

Field	Definition
UW NCF DSCR at Facility Level	For Credit Facilities, the ratio of a) the underwritten net cash flow from all properties in the facility at the time of a new issuance of a loan in the facility to b) the debt service amount, specifically the total principal and interest, for all active loans that are in the facility. Full interest-only loans will reflect only interest, and partial interest-only mortgage loans will reflect both principal and interest.
UW NCF DSCR IO at Facility Level	For Credit Facilities with at least one active partial interest-only loan still in its interest-only period, the ratio of a) the underwritten net cash flow from all properties in the facility at the time of a new issuance of a loan in the facility to b) the debt service amount, specifically the total principal and interest, for all active loans that are in the facility. Both full interest-only and partial interest-only mortgage loans will reflect only interest. If all partial interest-only loans are no longer in the interest only period, the field is null.

UW NCF DSCR at Facility Level—Example Deal 1

Loans	Settlement Date	Fixed/ Variable	Interest Only	Still in Interest Only Period	UPB	Original Interest Rate	Interest Accrual	Structured ARM Principal Payment	Current Annualized Payment used for existing loans / Target State Debt Calculation used for new loans	Debt	UW NCF DSCR at Facility Level
A	2012	SARM	Partial	**Yes**	$ 10,000,000	3.14	A/360	$60,000	Annualized Amortizing Payment	$ 1,038,361	
B	2012	SARM	Partial	**Yes**	$152,362,500	2.41	A/360	$100,000	Annualized Amortizing Payment	$ 4,922,935	
C	2016	Fixed	No	-----	$151,367,593	4.30	A/360		(Amortizing Payment * 12)	$ 8,988,900	
										$14,950,196	2.87

	Total NCF for Active (Existing and New) Collateral as of Most Current Issuance
Property 1 Existing	$20,100,000
Property 2 Existing	$15,000,000
Property 3 New	$ 7,832,966
Total NCF	**$42,832,966**

UW NCF DSCR at Facility Level:
$42,832,966/$14,950,196 = 2.87

UW NCF DSCR IO at Facility Level—Example Deal 1

UW NCF DSCR IO is required in this scenario since two existing partial IO loans are in their interest period

Loans	BED	Fixed/ Variable	Interest Only	Still in Interest Only Period	UPB	Original Interest Rate	Interest Accrual	Current Annualized Payment used for existing loans / Target State Debt Calculation used for new loans	Debt	UW NCF DSCR at Facility Level
A	2012	SARM	Partial	**Yes**	$ 10,000,000	3.14	A/360	Annualized Interest Payment	$ 318,361	
B	2012	SARM	Partial	**Yes**	$ 152,362,500	2.41	A/360	Annualized Interest Payment	$ 3,722,935	
C	2013	Fixed	No	-----	$ 151,367,593	4.30	A/360	(Amortizing Payment * 12)	$ 8,988,900	
									$13,030,196	3.29

$42,832,966/$13,030,196 = 3.29

UW NCF DSCR at Facility Level—Example Deal 2

In this scenario, only the UW NCF DSCR at Facility Level is required since there are no Partial IO loan still in their IO period

	Total NCF for Active (Existing and New) Collateral as of Most Current Issuance
Property 1 Existing	$4,591,096
Property 2 Existing	$3,207,985
Property 3 Existing	$5,309,791
Property 4 New	$2,960,233
Property 5 New	$4,907,562
Property 6 New	$4,933,461
Total NCF	**$25,910,118**

Loans	BED	Fixed/ Variable	Interest Only	UPB	Original Interest Rate	Interest Accrual	Current Annualized Payment used for existing loans / Target State Debt Calculation used for new loans	Debt	UW NCF DSCR at Facility Level
A	2015	Fixed	Full IO	$ 75,000,000	3.5	A/360	Annualized Interest Payment	$ 2,661,458	
B	2015	Fixed	Full IO	$ 75,000,000	3.72	A/360	Annualized Interest Payment	$ 2,828,750	
C	2015	Fixed	Full IO	$125,000,000	3.93	A/360	Annualized Interest Payment	$ 4,980,729	
D	2016	Variable - SARM	Full IO	$ 25,000,000	1.48	A/360	(UPB*(Original Int. Rate/100*365/360))	$ 375,139	
								$10,846,076	2.39

$25,910,118/$10,846,076 = 2.39

December 2017