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HOME EQUITY CONVERSION MORTGAGE
Using an HP12C to Calculate Payments to Borrowers

This appendix illustrates use of an HP12C for calculating
payments to borrowers under the Home Equity Conversion Mortgage Insurance
program. For simplicity, the examples assume a 75 year old borrower in a
$100,000 house with either a 10 percent interest rate and no servicing fee
or a 9.5 percent interest rate and a $12 servicing fee.

Screen Displays	You Enter	Keystrokes	
Determining the Principal Limit	_____	_____	_____
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Clear register.		[f] [REG]	0.000
Enter principal limit factor from table in Appendix 16 for 75 year old borrower and 10 percent interest rate.	.416	[ENTER]	.416
Multiply by maximum claim amount.	100,000	[x]	41,600.000
Calculating Tenure Payments			
Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter principal limit.	41,600	[ENTER]	41,600.000
Subtract initial payments--e.g., $2,000 mortgage insurance premium (MIP) and	3,500	[-]	38,100.000

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Page 1 of 12

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$1,500 closing costs.

Enter net principal limit.		[PV]	38,100.000
Enter expected rate.	10	[ENTER]	10.000
Add periodic MIP to calculate compounding rate.	.5	[+]	10.500
Enter monthly compounding rate.		[g] [i]	.875
Calculate years until borrower turns 100.	100	[ENTER]	100.000
Subtract age of youngest borrower rounded to nearest whole year.	75	[-]	25.000
Enter term in months.		[g] [n]	300.000
Calculate future value of principal limit.		[FV]	-519,983.179
Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly tenure payment.		[PMT]	356.613

Calculating Term Payments

Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000

Enter principal limit.	41,600	[ENTER]	41,600.000
Subtract initial payment --e.g., $2,000 mortgage insurance premium (MIP) and $1,500 closing costs.	3,500	[-]	38,100.000

Enter net principal limit.		[PV]	38,100.000
Enter monthly compounding rate.	10.5	[g] [i]	.875
Enter term (10 years).	10	[g] [n]	120.000
Calculate future value of principal limit.		[FV]	-108,380.389
Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly term payment.		[PMT]	509.643

Calculating Tenure Payment
With Monthly Servicing Charge
Set-Aside

Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter monthly servicing charge.	12	[PMT]	12.000
Enter compounding rate (9.5% + .5%).	10	[g] [i]	.833

4235.1 REV-1   Appendix 21

Enter term (100 - 75).	25	[g] [n]	300.000
Calculate servicing fee set-aside.		[PV]	-1,331.571
Add principal limit. (.443 x 100,000)	44,300	[+]	42,968.429
Subtract initial payments ($2,000 +$1,500).	3,500	[-]	39,468.429
Enter net principal		[PV]	39,468.429

limit.

Prepare to calculate monthly payments.	0	[PMT]	0.000
Calculate future value of principal limit.		[FV]	-475,868.673
Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly tenure payment.		[PMT]	355.686

Calculating Term Payment
With Initial Draw and
Line of Credit Set-Aside

Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter principal limit.	41,600	[ENTER]	41,600.000

Subtract initial payment --e.g., $2,000 mortgage insurance premium (MIP) and $1,500 closing costs.	3,500	[-]	38,100.000
Subtract initial draw.	5,000	[-]	33,100.000
Subtract line of credit set-aside.	2,000	[-]	31,100.000
Enter net principal limit.		[PV]	31,100.000
Enter monthly compounding rate.	10.5	[g] [i]	.875
Enter term (10 years).	10	[g] [n]	120.000
Calculate future value of principal limit.		[FV]	-88,467.981

Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly term payment.		[PMT]	416.008

Change in Payment Plan
After 60 Months From
Line of Credit to
7-Year Term (Assumes
$5,000 Initial Draw and
Financing of Closing Costs)

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Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter principal limit.	41,600	[ENTER]	41,600.000
Subtract initial payment --e.g., $2,000 mortgage insurance premium (MIP) and $1,500 closing costs.	3,500	[-]	38,100.000
Subtract initial draw.	5,000	[-]	33,100.000
Enter net principal limits.		[PV]	33,100.000
Enter monthly compounding rate.	10.5	[g] [i]	.875
Enter lapsed months.	60	[n]	60.000
Calculate future value of principal limit.		[FV]	-55,826.559
Prepare to calculate net principal limit.		[CHS]	55,826.559
Enter initial mortgage balance (3,500 + 5,000).	8,500	[PV]	8,500.000
Calculate current mortgage balance.		[FV]	-14,336.125

Calculate net principal limit.		[+]	41,490.433

Enter net principal limit.		[PV]	41,490.433
Enter term (7 years).	7	[g] [n]	84.000
Calculate future value of principal limit.		[FV]	-86,251.365
Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly term payment.		[PMT]	693.489

Change in Payment Plan
After 36 Months From
Tenure to 8-Year Term

Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter principal limit.	41,600	[ENTER]	41,600.000
Subtract initial payment --e.g., $2,000 mortgage insurance premium (MIP) and $1,500 closing costs.	3,500	[-]	38,100.000
Enter net principal limit.		[PV]	33,100.000
Enter monthly compounding rate.	10.5	[g] [i]	.875
Enter initial term.	25	[g] [n]	300.000

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Calculate future value of principal limit.		[FV]	-519,983.179
Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly tenure payment.		[PMT]	356.613
Prepare to calculate mortgage balance: Enter initial payments ($2,000 + $1,500).	3,500	[PV]	3,500.000
Enter lapsed months.	36	[n]	36.000
Calculate current mortgage balance.		[FV]	-19,934.451
Prepare to calculate principal limit.	0	[PMT]	0.000
Enter initial principal limit.	41,600	[PV]	41,600.000
Calculate current principal limit.		[FV]	-56,924.739
Prepare to calculate net principal limit.		[CHS]	56,924.739
Calculate net principal limit.		[+]	36,990.288
Enter net principal limit.		[PV]	36,990.288
Enter term (8 years).	8	[g] [n]	96.000
Calculate future value of principal limit.		[FV]	-85,370.593

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Prepare to calculate	0	[PV]	0.000

monthly payment.

Calculate monthly term payment.		[PMT]	566.177

Change in Payment Plan After 48 Months

From 10-Year Term with Service Fee to 14-Year Term

Clear register.		[f] [REG]	0.000
Set calculator for payments at beginning of period.		[g] [BEG]	0.000
Enter monthly servicing charge.	12	[PMT]	12.000
Enter compounding rate (9.5% + .5%).	10	[g] [i]	.833
Enter term (100 - 75).	25	[g] [n]	300.000
Calculate servicing fee set-aside.		[PV]	-1,331.571
Add principal limit. (.443 x 100,000)	44,300	[+]	42,968.429
Subtract initial payments ($2,000 + $1,500).	3,500	[-]	39,468.429
Enter net principal limit.		[PV]	39,468.429

4235.1 REV-1   Appendix 21

Prepare to calculate monthly payments.		[PMT]	0.000
Enter initial term.	10	[g][n]	120.000
Calculate future value of principal limit.		[FV]	-106,842.674

Prepare to calculate monthly payments.	0	[PV]	0.000
Calculate monthly term payment.		[PMT]	517.268
Add monthly service fee.	12	[+]	529.268
Enter total monthly payment.		[PMT]	529.268
Enter initial payments ($2,000 + $1,500).	3,500	[PV]	3,500.000
Enter lapsed months.	48	[n]	48.000
Calculate current mortgage balance.		[FV]	-36,551.653
Enter initial principal limit.	44,300	[PV]	44,300.000
Prepare to calculate current principal limit.	0	[PMT]	0.000
Calculate current principal limit.		[FV]	-65,978.387
Prepare to calculate net principal limit.		[CHS]	65,978.387
Calculate net principal limit.		[+]	29,426.734

Store net principal limit.		[STO] [1]	29,426.734
Clear entries.		[g] [FIN]	0.000
Recalculate servicing set-aside.	12	[PMT]	12.000
Enter compounding rate.	10	[g] [i]	.833
Enter original term	300	[ENTER]	300.000

of set-aside.

Subtract lapsed months.	48	[-]	252.000
Enter new term of set-aside.		[n]	252.000
Calculate servicing set-aside.		[PV]	-1,272.639
Recall net principal limit.		[RCL] [1]	29,426.734
Add net principal limit.		[+]	28,154.095
Enter net principal limit.		[PV]	28,154.095
Prepare to calculate monthly payment.	0	[PMT]	0.000
Enter new term.	14	[g] [n]	168.000
Calculate future value of principal limit.		[FV]	-113,510.085
Prepare to calculate monthly payment.	0	[PV]	0.000

4235.1 REV-1   Appendix 21

Calculate monthly payment.		[PMT]	309.426