Homework 3

**Question 1** Given the following information on a MPT, what is the anticipated total cash flow available

to investors in year 2? Round your answer to two decimals. (Note: You can perform this calculation with the spreadsheet or by completing it iteratively)

* 10 year FRM, fully amortizing, *annual* payments
* 10% CPR assumption
* 100 loans in the pool
* Average starting balance of $350,000/loan
* Mortgage rate 5%, annual
* No servicing/guarantee fees

**Use the Excel template that is part of the assignment to answer this question.**

**Question 2** Given the following information on a MPT, what is the servicing fee in year 3? Round your answer to two decimals. (Note: You can perform this calculation with the spreadsheet or by completing it iteratively)

* 10 year FRM, fully amortizing, *annual* payments
* No prepayment or default
* 100 loans in the pool
* Average starting balance of $350,000/loan
* Mortgage rate 5%, annual
* Servicing fee of 0.5% of the period’s starting outstanding pool balance

**Use the Excel template that is part of the assignment to answer this question.**

**Question 3** Given the following information of the mortgage pool that backs a MPT, what is the regular scheduled payment in month 1 of the security? Use WAC as the mortgage rate and WAM as the number of periods for your calculations. Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 4%
* Servicer/Guarantee fee: 0.55%
* Starting pool balance: 250,342,967
* Prepayment assumption: 75% PSA
* WAM: 357 (Loans seasoned for 3 months before entering pool)

**Question 4** Given the following information of the mortgage pool that backs a MPT (same as Question 3), what is the dollar amount of prepayment in month 1 of the security? Remember PSA is calculated based of month of the mortgage, not the security. Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 4%
* Servicer/Guarantee fee: 0.55%
* Starting pool balance: 250,342,967
* Prepayment assumption: 75% PSA
* WAM: 357 (Loans seasoned for 3 months before entering pool)

**Question 5** Given the following information of the mortgage pool that backs a MPT (same as Question 3), what is the total cash flow of the pool (i.e. to the issuer/SPV) in month 1 of this security? Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 4%
* Servicer/Guarantee fee: 0.55%
* Starting pool balance: 250,342,967
* Prepayment assumption: 75% PSA
* WAM: 357 (Loans seasoned for 3 months before entering pool)

**Question 6** Given the following information of the mortgage pool that backs a MPT (same as Question 3), what is the total cash flow of investors in month 1 of this security? Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 4%
* Servicer/Guarantee fee: 0.55%
* Starting pool balance: 250,342,967
* Prepayment assumption: 75% PSA
* WAM: 357 (Loans seasoned for 3 months before entering pool)

**Question 7** Given the following information of the mortgage pool that backs a MPT (same as Question 6), what is the month 1 ending/month 2 starting pool balance for this security? Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 4%
* Servicer/Guarantee fee: 0.55%
* Starting pool balance: 250,342,967
* Prepayment assumption: 75% PSA
* WAM: 357 (Loans seasoned for 3 months before entering pool)

**Question 8** Given the following information of the mortgage pool that backs a MPT, what is the dollar amount of prepayment in month 32? Round your final answer to two decimals.

* 30 year FRM, fully amortizing, *monthly* payments
* WAC: 5%
* Servicer/Guarantee fee: 0.5%
* Prepayment assumption: 300% PSA
* Loans were not seasoned before entering the pool
* MBS has been active for a few years in collecting payments from borrowers and making payments to investors
* It’s currently month 32 in the pool
* Starting pool balance at month 32: $52, 234, 988

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| **Question 9** Given the following information of the mortgage pool that backs a MPT (same as Question 8), what is the starting pool balance for month 33 of this security? Round your final answer to two decimals (Hint: N=360 when t=1, N=359 when t=2, N=358 when t=3 ...). |
|  | * 30 year FRM, fully amortizing, *monthly* payments
* WAC: 5%
* Servicer/Guarantee fee: 0.5%
* Prepayment assumption: 300% PSA
* Loans were not seasoned before entering the pool
* MBS has been active for a few years in collecting payments from borrowers and making payments to investors
* It’s currently month 32 in the pool
* Starting pool balance at month 32: $52, 234, 988
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| **Question 10** For a given MPT using 50% PSA as the prepayment assumption, would you expect the prepayment rate in month 40 to be higher or lower than the prepayment rate in month 45?1) Higher 2) Lower 3) Remain the same 4) Cannot be determined with the information given.. |