

CRÉDITO MI VIVIENDA

FÓRMULAS Y EJEMPLOS EXPLICATIVOS

Aplicable para los productos	CRÉDITO NUEVO MI VIVIENDA (FMV)
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DEFINICION DE CONCEPTOS:

N°	Concepto	Definición
1	Capital	Es el monto del préstamo, crédito o cantidad financiada.
2	Interés	Es el costo de un crédito o el crédito que se paga por el uso del dinero en calidad de préstamo.
3	Número de cuotas	Es el número de cuotas pactadas para hacer efectiva la cancelación o devolución del Capital.
4	Monto de cuota	Es el monto del pago periódico que se realiza para la cancelación del préstamo recibido, incluye amortización al capital, intereses, comisiones, gastos (seguros), impuestos (Impuesto a las Transacciones Financieras).
5	Frecuencia de pago	Es el periodo pactado en días que transcurre entre cada pago de cuota.
6	Fecha de desembolso	Fecha en que el cliente recibe el préstamo
7	Seguro de desgravamen	Seguro que cubre el saldo deudor pendiente de pago de fallecer el titular del préstamo. Se expresa en forma mensual.
8	Seguro Multirisgo	Es seguro sobre el valor de desembolso, que tiene por objeto el pago de la deuda que el asegurado mantenga frente a su acreedor, al momento de siniestros del inmueble como: terremotos, incendios, etc.
9	Impuesto a las Transacciones Financieras (ITF)	Es un Impuesto, que permite la bancarización de las operaciones económicas y comerciales que realizan las personas y empresas a través de empresas del sistema financiero, utilizando los medios de pago que la ley permite. Actualmente la tasa del ITF es de 0.005%.
10	Tasa de interés	Se define como aquel precio que se paga por el uso del dinero, durante un determinado período de tiempo, puede existir tasa compensatoria y moratoria.
11	Tasa Efectiva Compensatoria Anual (TEA)	Es la tasa de interés expresada anualmente y que se aplica sobre una suma de dinero, en función a un año de 360 días.
12	Tasa de Costo Efectiva Anual (TCEA)	Es la tasa de interés que expresa el costo real del préstamo, incluye intereses, gastos y comisiones. No incluye el ITF.
13	Interés moratorio	Es un porcentaje que se cobra cuando se cancelan las cuotas después de la fecha de vencimiento, es decir con atraso.
14	Pagos anticipados	Son los pagos (parciales o totales) que se aplican al capital del crédito, reduciendo los intereses, comisiones y gastos al día del pago. Los pagos mayores a dos cuotas (incluyendo aquella exigible en el periodo) se consideran pagos anticipados. El cliente que ha realizado un pago anticipado puede elegir entre reducir el monto de la cuota o reducir el número de cuotas.

CONSIDERACIONES:

Producto del Fondo Mi Vivienda, que te permite comprar cualquier vivienda, construir en terreno propio o aires independizados y mejorar tu vivienda.

Financia viviendas entre **S/ 61,200.00** hasta **S/ 436,100.00** en un plazo de pago de 05 a 25 años.

- Te ofrecemos el Bono del Buen Pagador (BBP) y el Premio del Buen Pagador como complemento de la cuota inicial (PBP).
- Te financiamos como máximo el 90% del valor de la vivienda.
- Tu cuota de pago siempre será la misma.
- Puedes realizar prepagos en cualquier momento (*).

(*) Se deberá devolver el BBP o PBP cuando se prepague en forma total el Crédito MIVIVIENDA antes de los 05 años de desembolsado el subpréstamo. Con excepción de los casos por aplicación de seguro de desgravamen o Multirriesgo.

Asignación Bono Buen Pagador:

Condicionado por parte del Estado a través del Bono al Buen Pagador.

- Es una ayuda económica no reembolsable que se otorga si adquieres un préstamo con el Nuevo Crédito MiVivienda a través de las Instituciones Financieras Intermediarias (IFI).
- Permite incrementar la cuota inicial y obtener un préstamo menor.
- Para vivienda sostenible **(1)** se aplicará 1.16279 UIT al BBP para vivienda tradicional **(2)**.
- El valor del BBP está en función del valor de la vivienda de forma escalonada:

Valor de la Vivienda(*)	BBP Tradicional (UIT)**	BBP Tradicional	BBP Sostenible (UIT) ****	BBP Sostenible
Desde S/ 65,200 hasta S/ 93,100	5.58139	S/ 24,700.00	6.74418	S/ 31,100.00
Mayores a S/ 93,100 hasta S/ 139,400	4.65116	S/ 21,400.00	5.81395	S/ 26,800.00
Mayores a S/ 139,400 hasta S/ 232,200	4.25581	S/ 19,600.00	5.4186	S/ 25,000.00
Mayores a S/ 232,200 hasta S/ 343,900	1.58139	S/ 10,300.00***	2.74418	S/ 16,200.00***
Mayores a S/ 343,900 hasta S/ 464,200				

(*) Los rangos serán actualizados producto de la multiplicación del valor de vivienda del año anterior por la variación del índice de Precio al Consumidor – IPC de Lima Metropolitana anual, con redondeo a la centena superior

(**) Los valores del BBP serán actualizados por la variación de la UIT, con redondeo a la centena superior.

(***) El FMV asumirá S/ 3,500.00 con el Premio al Buen Pagador como complemento de la cuota inicial.

(****) El valor adicional del BBP sostenible es 1.16279 UIT al valor del BBP Tradicional (en UIT).

(1) Vivienda Sostenible: Vivienda tradicional financiada con programas y/o productos financieros administrados por el FMV y que ha tomado en cuenta en su concepción y ejecución, entre otros, criterios de eficiencia hídrica y energética, de diseño bioclimático, manejo de residuos, utilización de eco materiales y que contribuya a la sostenibilidad en su entorno.

(2) Vivienda Tradicional: Vivienda unifamiliar o vivienda que forma parte de una Edificación multifamiliar o conjunto Residencial o Quinta, financiada con programas y/o productos financieros administrados por el FMV, capaz de satisfacer las necesidades básicas de la(s) persona(s) que la habita(n). En caso la vivienda cuente con estacionamiento y/o depósitos independizados, el valor total de la vivienda es la suma de los valores de la vivienda y la(s) respectiva(s) unidad(es) inmobiliaria(s).

FORMULAS APLICADAS:

El proceso de generación del cronograma de pagos está basado en un algoritmo de 16 iteraciones (pasos repetitivos), que permiten realizar ajustes a la cuota fija mensual (similar a la función “Buscar Objetivo” del Excel), de tal manera que la cuota registre un importe fijo mensual. A continuación, se describe el proceso:

1. Se toma los siguientes datos del préstamo:
 - P : Capital
 - TEM : Tasa Efectiva Mensual
 - TMSD : Tasa Mensual de Seguro de Desgravamen
 - TMSM : Tasa Mensual de Seguro Multirriesgo
 - N : Número de cuotas
 - FD : Fecha de desembolso
 - DP : Día de pago de cada cuota
2. Se calcula los Días Transcurridos (DT) desde el desembolso hasta el primer día de vencimiento y luego los días transcurridos de las siguientes cuotas.
3. Se calcula la Tasa Efectiva Mensual Seguro de Desgravamen (TEMSD):

$$\text{TEMSD} = [(1 + \text{TMSD} / 30) ^ 30] - 1$$
4. Se calcula la Tasa Efectiva Mensual Totalizada (TEMTotal):

$$\text{TEMTotal} = (\text{TEM} + \text{TEMSD})$$
5. Se calcula la Tasa Efectiva Diaria (TED):

$$\text{TED} = [((1 + \text{TEM}) ^ (1 / 30)) - 1]$$
6. Se calcula la Tasa Efectiva Diaria Totalizada (TEDTotal):

$$\text{TEDTotal} = [((1 + \text{TEMTotal}) ^ (1 / 30)) - 1]$$
7. Se calcula los Días Acumulados (DA): días al vencimiento de la cuota más días transcurridos de la cuota anterior.
8. Se obtiene el Factor Mensual (FM):

$$\text{FM} = 1 / (1 + \text{TEDTotal}) ^ \text{DA}$$
9. Se suma el Factor Mensual calculado para cada mes a fin de obtener el Factor Acumulado (FA):

$$\text{FA} = \Sigma \text{FM}$$

Esta suma se emplea como el factor de la cuota.

10. Se calcula la cuota del Seguro Multirriesgo (SM)

$$\text{SM} = (\text{TMSM} * \text{SA}) + [(\text{TMSM} * \text{SA}) / 30 * \text{DGR}] / \text{N}]$$

Donde,

SA: Suma asegurada del inmueble otorgados en garantía

DGR: Días de Gracia

Se realiza el cálculo del Seguro Multirriesgo, siempre y cuando el crédito registre un bien asegurable. Para créditos con periodo de gracia, la prima del seguro del periodo de gracia se distribuye entre el total de cuotas.

Ejemplo: Crédito Sin Periodo de Gracia:

SA : 250,000 Soles

TMSM : 0.020%

N : 12 cuotas

$$SM = (0.020\% * 250,000) + [(0.020\% * 250,000) / 30 * 0] / 12]$$

$$SM = 50 + 0$$

$$SM = 50.00 \text{ soles}$$

Prima mensual del Seguro Multirriesgo es igual a S/ 50.00

Ejemplo: Crédito con 45 días de Periodo de Gracia:

SA : 250,000 Soles

TMSM : 0.020%

N : 12 cuotas

DGR : 45 días

$$SM = (0.020\% * 250,000) + [(0.020\% * 250,000) / 30 * 45] / 12]$$

$$SM = 50 + 6.25$$

$$SM = 56.25 \text{ soles}$$

Prima mensual del Seguro Multirriesgo es igual a S/ 56.25

11. Se calcula el Monto de Cuota (MC) con la siguiente fórmula:

$$MC = (P / FA) + SM$$

12. Luego que hemos obtenido el Monto de Cuota (MC), se calcula los componentes la cuota:

$$MC = AK + IC + SD + SM$$

Donde,

AK : Amortización de Capital

IC : Intereses Compensatorio

SD : Cuota del Seguro de Desgravamen

SM : Cuota del Seguro Multirriesgo

Interés Compensatorio (I)

$$I = SK * (1 + TED)^{DT}$$

Donde,

SK : Saldo Capital

Seguro de Desgravamen (SD)

Calculo primera cuota:

$$SD_{Cuota(01)} = P * (TMSD/30 * DT)$$

Calculo cuotas siguientes:

$$SD_{Cuota(02)} = \text{Saldo Capital} * TMSD$$

$$SD_{Cuota(03)} = \text{Saldo Capital} * TMSD$$

.....

$$SD_{Cuota(n)} = \text{Saldo Capital} * TMSD$$

$$\text{Amortización Capital} = MC - \text{Interés} - \text{Seguro de Desgravamen} - \text{Seguro Multiriesgo}$$

Si en la primera cuota, la suma: IC + SD + SM, es mayor que el Monto de Cuota (MC) calculado, el MC de dicho mes será igual a la suma indicada, y la amortización del capital (AK) se pagará a partir de la siguiente cuota con el cálculo antes indicado.

13. Se sigue con el procedimiento indicado en los pasos anteriores hasta completar el cronograma de pagos.
14. Si en el primer cronograma de pagos, el Saldo de Capital Final (SKU) es diferente a uno, se deberá calcular el Ajuste por Iteración (AI) que se adiciona al Monto de Cuota (MC) para la generación del siguiente cronograma.

Calculo del Ajuste por Iteración (AI):

- i) Se calcula el Factor Valor Actual Saldo (FVAS):

$$\text{Factor Valor Actual Saldo (FVAS)} = (1 + TD)^{(\text{Días Acumulados})}$$

- ii) Se calcula el Ajuste por Iteración (AI)

$$\text{Ajuste por Iteración (AI)} = [(SKU / FVAS) * (1 / \sum(FA))]$$

El valor obtenido se adiciona al Monto de Cuota (MC) para la generación del siguiente cronograma en la iteración 2, y así sucesivamente continúa el siguiente proceso iterativo hasta encontrar un SKU entre ± 1 o hasta concluir en la iteración número 16, siendo este el cronograma final.

EJEMPLOS EXPLICATIVOS

I) CASO CREDITO SIN PERIODO DE GRACIA

Un cliente solicita crédito hipotecario bajo el producto de crédito Mi Vivienda, para adquirir una vivienda valorizada en S/ 150,000.00, pactando con a una tasa de interés anual de 13% a un plazo de 10 años, el bono de buen pagador es de S/ 19,600, la cuota inicial que tiene el cliente es de S/ 16,400.00; asimismo, el prestatario paga el seguro de desgravamen y Multirriesgo.

Valor de la Vivienda : S/ 150,000.00
 Cuota Inicial : (S/ 16,400.00)
 BBP (*) : (S/ 18,800.00)
 MONTO DEL PRESTAMO : **S/ 114,000.00**

(*) Información actualizada sobre el Bono de Buen Pagador en la página web: <https://www.mivivienda.com.pe/>

Se pide:

- Calcular cuánto es la cuota fija mensual a pagar durante el periodo
- Elaborar el cronograma de pagos.
- Calcular la tasa de costo efectivo anual

Datos:

TEA : 13% (tarifario)
 Préstamo (P) : 114,000
 Suma asegurada : 150,000 (Valor de la garantía)
 Plazo de las cuotas (N) : 120 meses
 Seguro de desgravamen : 0.100% (un titular)
 Seguro Multirriesgo : 0.020%

3. Generacion del Cronograma:

Tasa Mensual Seguro de Desgravamen			Tasa Efectiva Diaria	TED	0.03396%
Tasa Efectiva Mensual Seguro de Desgravamen	TEMSD	0.10005%	TED = [((1 + TEM) ^ (1 / 30)) - 1]		
TEMSD = [(1 + TMSD / 30) ^ 30] - 1					
Tasa Efectiva Mensual Totalizada	TEMTot	1.09370%	Tasa Efectiva Diaria Totalizada	TEDTota	0.03726%
TEMTot = (TEM + TEMSD)			TEDTota = [((1 + TEMTotal) ^ (1 / 30)) - 1]		
Factor Acumulado	FA	65.2232	Factor Valor Actual Saldo	FVAS	3.8975
Tasa Mensual Seguro Multirriesgo					
Tasa Efectiva Mensual Seguro multirriesgo	TEMSM	0.22800%			
TEMSM = [(1 + TMSM / 30) ^ 30] - 1					

CRONOGRAMA (iteración 1):

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/09/2020		114,000.00				114,000.00		114,000.00
20/10/2020	1	465.62	1,167.02	114.00	30.00	113,534.38	1,776.64	1,776.64
20/11/2020	2	431.91	1,201.20	113.53	30.00	113,102.47	1,776.64	1,776.64
20/12/2020	3	475.71	1,157.83	113.10	30.00	112,626.76	1,776.64	1,776.64
20/01/2021	4	442.42	1,191.59	112.63	30.00	112,184.34	1,776.64	1,776.64
20/02/2021	5	447.55	1,186.91	112.18	30.00	111,736.79	1,776.64	1,776.64
20/03/2021	6	567.67	1,067.23	111.74	30.00	111,169.12	1,776.64	1,776.64
20/04/2021	7	459.30	1,176.17	111.17	30.00	110,709.82	1,776.64	1,776.64
20/05/2021	8	502.59	1,133.34	110.71	30.00	110,207.23	1,776.64	1,776.64
20/06/2021	9	470.43	1,166.00	110.21	30.00	109,736.80	1,776.64	1,776.64
20/07/2021	10	513.52	1,123.38	109.74	30.00	109,223.28	1,776.64	1,776.64
20/08/2021	11	481.83	1,155.59	109.22	30.00	108,741.45	1,776.64	1,776.64
20/09/2021	12	487.41	1,150.49	108.74	30.00	108,254.05	1,776.64	1,776.64
20/10/2021	13	530.19	1,108.20	108.25	30.00	107,723.86	1,776.64	1,776.64
20/11/2021	14	499.20	1,139.72	107.72	30.00	107,224.66	1,776.64	1,776.64
20/12/2021	15	541.76	1,097.66	107.22	30.00	106,682.90	1,776.64	1,776.64
20/01/2022	16	511.25	1,128.71	106.68	30.00	106,171.65	1,776.64	1,776.64
20/02/2022	17	517.17	1,123.30	106.17	30.00	105,654.48	1,776.64	1,776.64
20/03/2022	18	631.85	1,009.14	105.65	30.00	105,022.63	1,776.64	1,776.64
20/04/2022	19	530.48	1,111.14	105.02	30.00	104,492.15	1,776.64	1,776.64
20/05/2022	20	572.46	1,069.69	104.49	30.00	103,919.69	1,776.64	1,776.64
20/06/2022	21	543.25	1,099.47	103.92	30.00	103,376.44	1,776.64	1,776.64
20/07/2022	22	585.00	1,058.26	103.38	30.00	102,791.44	1,776.64	1,776.64
20/08/2022	23	556.31	1,087.54	102.79	30.00	102,235.13	1,776.64	1,776.64
20/09/2022	24	562.75	1,081.65	102.24	30.00	101,672.38	1,776.64	1,776.64
20/10/2022	25	604.15	1,040.82	101.67	30.00	101,068.23	1,776.64	1,776.64
20/11/2022	26	576.26	1,069.31	101.07	30.00	100,491.97	1,776.64	1,776.64
20/12/2022	27	617.41	1,028.74	100.49	30.00	99,874.56	1,776.64	1,776.64
20/01/2023	28	590.09	1,056.68	99.87	30.00	99,284.47	1,776.64	1,776.64
20/02/2023	29	596.93	1,050.43	99.28	30.00	98,687.54	1,776.64	1,776.64
20/03/2023	30	705.36	942.59	98.69	30.00	97,982.18	1,776.64	1,776.64
20/04/2023	31	612.01	1,036.65	97.98	30.00	97,370.17	1,776.64	1,776.64
20/05/2023	32	652.49	996.78	97.37	30.00	96,717.68	1,776.64	1,776.64
20/06/2023	33	626.64	1,023.28	96.72	30.00	96,091.04	1,776.64	1,776.64
20/07/2023	34	666.87	983.68	96.09	30.00	95,424.17	1,776.64	1,776.64
20/08/2023	35	641.63	1,009.59	95.42	30.00	94,782.54	1,776.64	1,776.64
20/09/2023	36	649.06	1,002.80	94.78	30.00	94,133.48	1,776.64	1,776.64
20/10/2023	37	688.87	963.64	94.13	30.00	93,444.61	1,776.64	1,776.64
20/11/2023	38	664.55	988.65	93.44	30.00	92,780.06	1,776.64	1,776.64
20/12/2023	39	704.07	949.79	92.78	30.00	92,075.99	1,776.64	1,776.64
20/01/2024	40	680.39	974.17	92.08	30.00	91,395.60	1,776.64	1,776.64
20/02/2024	41	688.27	966.97	91.40	30.00	90,707.33	1,776.64	1,776.64
20/03/2024	42	758.46	897.47	90.71	30.00	89,948.87	1,776.64	1,776.64
20/04/2024	43	705.03	951.66	89.95	30.00	89,243.84	1,776.64	1,776.64
20/05/2024	44	743.81	913.59	89.24	30.00	88,500.03	1,776.64	1,776.64
20/06/2024	45	721.81	936.33	88.50	30.00	87,778.22	1,776.64	1,776.64
20/07/2024	46	760.27	898.59	87.78	30.00	87,017.95	1,776.64	1,776.64
20/08/2024	47	738.97	920.65	87.02	30.00	86,278.98	1,776.64	1,776.64
20/09/2024	48	747.53	912.83	86.28	30.00	85,531.45	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/10/2024	49	785.52	875.59	85.53	30.00	84,745.93	1,776.64	1,776.64
20/11/2024	50	765.28	896.61	84.75	30.00	83,980.65	1,776.64	1,776.64
20/12/2024	51	802.95	859.71	83.98	30.00	83,177.70	1,776.64	1,776.64
20/01/2025	52	783.44	880.02	83.18	30.00	82,394.26	1,776.64	1,776.64
20/02/2025	53	792.52	871.73	82.39	30.00	81,601.74	1,776.64	1,776.64
20/03/2025	54	885.64	779.40	81.60	30.00	80,716.10	1,776.64	1,776.64
20/04/2025	55	811.94	853.98	80.72	30.00	79,904.16	1,776.64	1,776.64
20/05/2025	56	848.76	817.98	79.90	30.00	79,055.40	1,776.64	1,776.64
20/06/2025	57	831.17	836.41	79.06	30.00	78,224.23	1,776.64	1,776.64
20/07/2025	58	867.64	800.78	78.22	30.00	77,356.59	1,776.64	1,776.64
20/08/2025	59	850.84	818.44	77.36	30.00	76,505.75	1,776.64	1,776.64
20/09/2025	60	860.70	809.43	76.51	30.00	75,645.05	1,776.64	1,776.64
20/10/2025	61	896.61	774.38	75.65	30.00	74,748.44	1,776.64	1,776.64
20/11/2025	62	881.05	790.84	74.75	30.00	73,867.39	1,776.64	1,776.64
20/12/2025	63	916.59	756.18	73.87	30.00	72,950.80	1,776.64	1,776.64
20/01/2026	64	901.87	771.82	72.95	30.00	72,048.93	1,776.64	1,776.64
20/02/2026	65	912.31	762.28	72.05	30.00	71,136.62	1,776.64	1,776.64
20/03/2026	66	996.05	679.45	71.14	30.00	70,140.57	1,776.64	1,776.64
20/04/2026	67	934.41	742.09	70.14	30.00	69,206.16	1,776.64	1,776.64
20/05/2026	68	968.97	708.46	69.21	30.00	68,237.19	1,776.64	1,776.64
20/06/2026	69	956.45	721.95	68.24	30.00	67,280.74	1,776.64	1,776.64
20/07/2026	70	990.61	688.75	67.28	30.00	66,290.13	1,776.64	1,776.64
20/08/2026	71	979.00	701.35	66.29	30.00	65,311.13	1,776.64	1,776.64
20/09/2026	72	990.34	690.99	65.31	30.00	64,320.79	1,776.64	1,776.64
20/10/2026	73	1,023.87	658.45	64.32	30.00	63,296.92	1,776.64	1,776.64
20/11/2026	74	1,013.66	669.68	63.30	30.00	62,283.26	1,776.64	1,776.64
20/12/2026	75	1,046.77	637.59	62.28	30.00	61,236.49	1,776.64	1,776.64
20/01/2027	76	1,037.52	647.88	61.24	30.00	60,198.97	1,776.64	1,776.64
20/02/2027	77	1,049.53	636.91	60.20	30.00	59,149.44	1,776.64	1,776.64
20/03/2027	78	1,122.54	564.95	59.15	30.00	58,026.90	1,776.64	1,776.64
20/04/2027	79	1,074.68	613.93	58.03	30.00	56,952.22	1,776.64	1,776.64
20/05/2027	80	1,106.67	583.02	56.95	30.00	55,845.55	1,776.64	1,776.64
20/06/2027	81	1,099.94	590.85	55.85	30.00	54,745.61	1,776.64	1,776.64
20/07/2027	82	1,131.46	560.43	54.75	30.00	53,614.15	1,776.64	1,776.64
20/08/2027	83	1,125.79	567.24	53.61	30.00	52,488.36	1,776.64	1,776.64
20/09/2027	84	1,138.82	555.33	52.49	30.00	51,349.54	1,776.64	1,776.64
20/10/2027	85	1,169.62	525.67	51.35	30.00	50,179.92	1,776.64	1,776.64
20/11/2027	86	1,165.55	530.91	50.18	30.00	49,014.37	1,776.64	1,776.64
20/12/2027	87	1,195.87	501.76	49.01	30.00	47,818.50	1,776.64	1,776.64
20/01/2028	88	1,192.90	505.92	47.82	30.00	46,625.60	1,776.64	1,776.64
20/02/2028	89	1,206.71	493.30	46.63	30.00	45,418.89	1,776.64	1,776.64
20/03/2028	90	1,251.84	449.38	45.42	30.00	44,167.05	1,776.64	1,776.64
20/04/2028	91	1,235.18	467.29	44.17	30.00	42,931.87	1,776.64	1,776.64
20/05/2028	92	1,264.22	439.49	42.93	30.00	41,667.65	1,776.64	1,776.64
20/06/2028	93	1,264.12	440.85	41.67	30.00	40,403.53	1,776.64	1,776.64
20/07/2028	94	1,292.63	413.61	40.40	30.00	39,110.90	1,776.64	1,776.64
20/08/2028	95	1,293.74	413.79	39.11	30.00	37,817.16	1,776.64	1,776.64
20/09/2028	96	1,308.71	400.11	37.82	30.00	36,508.45	1,776.64	1,776.64
20/10/2028	97	1,336.39	373.74	36.51	30.00	35,172.06	1,776.64	1,776.64
20/11/2028	98	1,339.35	372.12	35.17	30.00	33,832.71	1,776.64	1,776.64
20/12/2028	99	1,366.46	346.35	33.83	30.00	32,466.25	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/01/2029	100	1,370.68	343.49	32.47	30.00	31,095.57	1,776.64	1,776.64
20/02/2029	101	1,386.55	328.99	31.10	30.00	29,709.02	1,776.64	1,776.64
20/03/2029	102	1,433.17	283.76	29.71	30.00	28,275.85	1,776.64	1,776.64
20/04/2029	103	1,419.20	299.16	28.28	30.00	26,856.65	1,776.64	1,776.64
20/05/2029	104	1,444.85	274.93	26.86	30.00	25,411.80	1,776.64	1,776.64
20/06/2029	105	1,452.37	268.86	25.41	30.00	23,959.43	1,776.64	1,776.64
20/07/2029	106	1,477.41	245.27	23.96	30.00	22,482.02	1,776.64	1,776.64
20/08/2029	107	1,486.30	237.86	22.48	30.00	20,995.72	1,776.64	1,776.64
20/09/2029	108	1,503.50	222.14	21.00	30.00	19,492.22	1,776.64	1,776.64
20/10/2029	109	1,527.61	199.54	19.49	30.00	17,964.61	1,776.64	1,776.64
20/11/2029	110	1,538.61	190.07	17.96	30.00	16,426.00	1,776.64	1,776.64
20/12/2029	111	1,562.06	168.15	16.43	30.00	14,863.94	1,776.64	1,776.64
20/01/2030	112	1,574.52	157.26	14.86	30.00	13,289.42	1,776.64	1,776.64
20/02/2030	113	1,592.75	140.60	13.29	30.00	11,696.67	1,776.64	1,776.64
20/03/2030	114	1,623.22	111.72	11.70	30.00	10,073.45	1,776.64	1,776.64
20/04/2030	115	1,629.99	106.58	10.07	30.00	8,443.46	1,776.64	1,776.64
20/05/2030	116	1,651.76	86.44	8.44	30.00	6,791.70	1,776.64	1,776.64
20/06/2030	117	1,667.99	71.86	6.79	30.00	5,123.71	1,776.64	1,776.64
20/07/2030	118	1,689.07	52.45	5.12	30.00	3,434.64	1,776.64	1,776.64
20/08/2030	119	1,706.87	36.34	3.43	30.00	1,727.77	1,776.64	1,776.64
20/09/2030	120	1,726.63	18.28	1.73	30.00	1.12	1,776.64	1,776.64
		113,998.88	87,199.83	8,398.09	3,600.00			
								TCEA 15.04%
								TCEM 1.17%

Se obtiene un SKU de 1.12 diferente a ± 1 , y se procede a realizar la 2da Iteración.

Para ello, calculamos Ajuste por Iteración (AI):

$$AI = [(SKU / FVAS) * (1 / \sum(FA))]$$

$$AI = [(1.12 / 3.8975) * (1 / 65.2232)]$$

$$AI = 0.00$$

El valor calculado se adiciona al Monto Cuota (MC)

$$MC_2 = MC_1 + AI$$

$$MC_2 = 1,776.64 + (1.12)$$

$$MC_2 = 1,777.76$$

Con el Monto Cuota actualizado, se continúa proceso iterativo, generando un nuevo cronograma de pagos hasta encontrar un SKU entre ± 1 o hasta concluir en la iteración número 16:

CRONOGRAMA FINAL:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/09/2020		114,000.00				114,000.00		-
20/10/2020	1	465.62	1,167.02	114.00	30.00	113,534.38	1,776.64	1,776.64
20/11/2020	2	431.91	1,201.20	113.53	30.00	113,102.47	1,776.64	1,776.64
20/12/2020	3	475.71	1,157.83	113.10	30.00	112,626.76	1,776.64	1,776.64
20/01/2021	4	442.42	1,191.59	112.63	30.00	112,184.34	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/02/2021	5	447.55	1,186.91	112.18	30.00	111,736.79	1,776.64	1,776.64
20/03/2021	6	567.67	1,067.23	111.74	30.00	111,169.12	1,776.64	1,776.64
20/04/2021	7	459.30	1,176.17	111.17	30.00	110,709.82	1,776.64	1,776.64
20/05/2021	8	502.59	1,133.34	110.71	30.00	110,207.23	1,776.64	1,776.64
20/06/2021	9	470.43	1,166.00	110.21	30.00	109,736.80	1,776.64	1,776.64
20/07/2021	10	513.52	1,123.38	109.74	30.00	109,223.28	1,776.64	1,776.64
20/08/2021	11	481.83	1,155.59	109.22	30.00	108,741.45	1,776.64	1,776.64
20/09/2021	12	487.41	1,150.49	108.74	30.00	108,254.05	1,776.64	1,776.64
20/10/2021	13	530.19	1,108.20	108.25	30.00	107,723.86	1,776.64	1,776.64
20/11/2021	14	499.20	1,139.72	107.72	30.00	107,224.66	1,776.64	1,776.64
20/12/2021	15	541.76	1,097.66	107.22	30.00	106,682.90	1,776.64	1,776.64
20/01/2022	16	511.25	1,128.71	106.68	30.00	106,171.65	1,776.64	1,776.64
20/02/2022	17	517.17	1,123.30	106.17	30.00	105,654.48	1,776.64	1,776.64
20/03/2022	18	631.85	1,009.14	105.65	30.00	105,022.63	1,776.64	1,776.64
20/04/2022	19	530.48	1,111.14	105.02	30.00	104,492.15	1,776.64	1,776.64
20/05/2022	20	572.46	1,069.69	104.49	30.00	103,919.69	1,776.64	1,776.64
20/06/2022	21	543.25	1,099.47	103.92	30.00	103,376.44	1,776.64	1,776.64
20/07/2022	22	585.00	1,058.26	103.38	30.00	102,791.44	1,776.64	1,776.64
20/08/2022	23	556.31	1,087.54	102.79	30.00	102,235.13	1,776.64	1,776.64
20/09/2022	24	562.75	1,081.65	102.24	30.00	101,672.38	1,776.64	1,776.64
20/10/2022	25	604.15	1,040.82	101.67	30.00	101,068.23	1,776.64	1,776.64
20/11/2022	26	576.26	1,069.31	101.07	30.00	100,491.97	1,776.64	1,776.64
20/12/2022	27	617.41	1,028.74	100.49	30.00	99,874.56	1,776.64	1,776.64
20/01/2023	28	590.09	1,056.68	99.87	30.00	99,284.47	1,776.64	1,776.64
20/02/2023	29	596.93	1,050.43	99.28	30.00	98,687.54	1,776.64	1,776.64
20/03/2023	30	705.36	942.59	98.69	30.00	97,982.18	1,776.64	1,776.64
20/04/2023	31	612.01	1,036.65	97.98	30.00	97,370.17	1,776.64	1,776.64
20/05/2023	32	652.49	996.78	97.37	30.00	96,717.68	1,776.64	1,776.64
20/06/2023	33	626.64	1,023.28	96.72	30.00	96,091.04	1,776.64	1,776.64
20/07/2023	34	666.87	983.68	96.09	30.00	95,424.17	1,776.64	1,776.64
20/08/2023	35	641.63	1,009.59	95.42	30.00	94,782.54	1,776.64	1,776.64
20/09/2023	36	649.06	1,002.80	94.78	30.00	94,133.48	1,776.64	1,776.64
20/10/2023	37	688.87	963.64	94.13	30.00	93,444.61	1,776.64	1,776.64
20/11/2023	38	664.55	988.65	93.44	30.00	92,780.06	1,776.64	1,776.64
20/12/2023	39	704.07	949.79	92.78	30.00	92,075.99	1,776.64	1,776.64
20/01/2024	40	680.39	974.17	92.08	30.00	91,395.60	1,776.64	1,776.64
20/02/2024	41	688.27	966.97	91.40	30.00	90,707.33	1,776.64	1,776.64
20/03/2024	42	758.46	897.47	90.71	30.00	89,948.87	1,776.64	1,776.64
20/04/2024	43	705.03	951.66	89.95	30.00	89,243.84	1,776.64	1,776.64
20/05/2024	44	743.81	913.59	89.24	30.00	88,500.03	1,776.64	1,776.64
20/06/2024	45	721.81	936.33	88.50	30.00	87,778.22	1,776.64	1,776.64
20/07/2024	46	760.27	898.59	87.78	30.00	87,017.95	1,776.64	1,776.64
20/08/2024	47	738.97	920.65	87.02	30.00	86,278.98	1,776.64	1,776.64
20/09/2024	48	747.53	912.83	86.28	30.00	85,531.45	1,776.64	1,776.64
20/10/2024	49	785.52	875.59	85.53	30.00	84,745.93	1,776.64	1,776.64
20/11/2024	50	765.28	896.61	84.75	30.00	83,980.65	1,776.64	1,776.64
20/12/2024	51	802.95	859.71	83.98	30.00	83,177.70	1,776.64	1,776.64
20/01/2025	52	783.44	880.02	83.18	30.00	82,394.26	1,776.64	1,776.64
20/02/2025	53	792.52	871.73	82.39	30.00	81,601.74	1,776.64	1,776.64
20/03/2025	54	885.64	779.40	81.60	30.00	80,716.10	1,776.64	1,776.64
20/04/2025	55	811.94	853.98	80.72	30.00	79,904.16	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/05/2025	56	848.76	817.98	79.90	30.00	79,055.40	1,776.64	1,776.64
20/06/2025	57	831.17	836.41	79.06	30.00	78,224.23	1,776.64	1,776.64
20/07/2025	58	867.64	800.78	78.22	30.00	77,356.59	1,776.64	1,776.64
20/08/2025	59	850.84	818.44	77.36	30.00	76,505.75	1,776.64	1,776.64
20/09/2025	60	860.70	809.43	76.51	30.00	75,645.05	1,776.64	1,776.64
20/10/2025	61	896.61	774.38	75.65	30.00	74,748.44	1,776.64	1,776.64
20/11/2025	62	881.05	790.84	74.75	30.00	73,867.39	1,776.64	1,776.64
20/12/2025	63	916.59	756.18	73.87	30.00	72,950.80	1,776.64	1,776.64
20/01/2026	64	901.87	771.82	72.95	30.00	72,048.93	1,776.64	1,776.64
20/02/2026	65	912.31	762.28	72.05	30.00	71,136.62	1,776.64	1,776.64
20/03/2026	66	996.05	679.45	71.14	30.00	70,140.57	1,776.64	1,776.64
20/04/2026	67	934.41	742.09	70.14	30.00	69,206.16	1,776.64	1,776.64
20/05/2026	68	968.97	708.46	69.21	30.00	68,237.19	1,776.64	1,776.64
20/06/2026	69	956.45	721.95	68.24	30.00	67,280.74	1,776.64	1,776.64
20/07/2026	70	990.61	688.75	67.28	30.00	66,290.13	1,776.64	1,776.64
20/08/2026	71	979.00	701.35	66.29	30.00	65,311.13	1,776.64	1,776.64
20/09/2026	72	990.34	690.99	65.31	30.00	64,320.79	1,776.64	1,776.64
20/10/2026	73	1,023.87	658.45	64.32	30.00	63,296.92	1,776.64	1,776.64
20/11/2026	74	1,013.66	669.68	63.30	30.00	62,283.26	1,776.64	1,776.64
20/12/2026	75	1,046.77	637.59	62.28	30.00	61,236.49	1,776.64	1,776.64
20/01/2027	76	1,037.52	647.88	61.24	30.00	60,198.97	1,776.64	1,776.64
20/02/2027	77	1,049.53	636.91	60.20	30.00	59,149.44	1,776.64	1,776.64
20/03/2027	78	1,122.54	564.95	59.15	30.00	58,026.90	1,776.64	1,776.64
20/04/2027	79	1,074.68	613.93	58.03	30.00	56,952.22	1,776.64	1,776.64
20/05/2027	80	1,106.67	583.02	56.95	30.00	55,845.55	1,776.64	1,776.64
20/06/2027	81	1,099.94	590.85	55.85	30.00	54,745.61	1,776.64	1,776.64
20/07/2027	82	1,131.46	560.43	54.75	30.00	53,614.15	1,776.64	1,776.64
20/08/2027	83	1,125.79	567.24	53.61	30.00	52,488.36	1,776.64	1,776.64
20/09/2027	84	1,138.82	555.33	52.49	30.00	51,349.54	1,776.64	1,776.64
20/10/2027	85	1,169.62	525.67	51.35	30.00	50,179.92	1,776.64	1,776.64
20/11/2027	86	1,165.55	530.91	50.18	30.00	49,014.37	1,776.64	1,776.64
20/12/2027	87	1,195.87	501.76	49.01	30.00	47,818.50	1,776.64	1,776.64
20/01/2028	88	1,192.90	505.92	47.82	30.00	46,625.60	1,776.64	1,776.64
20/02/2028	89	1,206.71	493.30	46.63	30.00	45,418.89	1,776.64	1,776.64
20/03/2028	90	1,251.84	449.38	45.42	30.00	44,167.05	1,776.64	1,776.64
20/04/2028	91	1,235.18	467.29	44.17	30.00	42,931.87	1,776.64	1,776.64
20/05/2028	92	1,264.22	439.49	42.93	30.00	41,667.65	1,776.64	1,776.64
20/06/2028	93	1,264.12	440.85	41.67	30.00	40,403.53	1,776.64	1,776.64
20/07/2028	94	1,292.63	413.61	40.40	30.00	39,110.90	1,776.64	1,776.64
20/08/2028	95	1,293.74	413.79	39.11	30.00	37,817.16	1,776.64	1,776.64
20/09/2028	96	1,308.71	400.11	37.82	30.00	36,508.45	1,776.64	1,776.64
20/10/2028	97	1,336.39	373.74	36.51	30.00	35,172.06	1,776.64	1,776.64
20/11/2028	98	1,339.35	372.12	35.17	30.00	33,832.71	1,776.64	1,776.64
20/12/2028	99	1,366.46	346.35	33.83	30.00	32,466.25	1,776.64	1,776.64
20/01/2029	100	1,370.68	343.49	32.47	30.00	31,095.57	1,776.64	1,776.64
20/02/2029	101	1,386.55	328.99	31.10	30.00	29,709.02	1,776.64	1,776.64
20/03/2029	102	1,433.17	283.76	29.71	30.00	28,275.85	1,776.64	1,776.64
20/04/2029	103	1,419.20	299.16	28.28	30.00	26,856.65	1,776.64	1,776.64
20/05/2029	104	1,444.85	274.93	26.86	30.00	25,411.80	1,776.64	1,776.64
20/06/2029	105	1,452.37	268.86	25.41	30.00	23,959.43	1,776.64	1,776.64
20/07/2029	106	1,477.41	245.27	23.96	30.00	22,482.02	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/08/2029	107	1,486.30	237.86	22.48	30.00	20,995.72	1,776.64	1,776.64
20/09/2029	108	1,503.50	222.14	21.00	30.00	19,492.22	1,776.64	1,776.64
20/10/2029	109	1,527.61	199.54	19.49	30.00	17,964.61	1,776.64	1,776.64
20/11/2029	110	1,538.61	190.07	17.96	30.00	16,426.00	1,776.64	1,776.64
20/12/2029	111	1,562.06	168.15	16.43	30.00	14,863.94	1,776.64	1,776.64
20/01/2030	112	1,574.52	157.26	14.86	30.00	13,289.42	1,776.64	1,776.64
20/02/2030	113	1,592.75	140.60	13.29	30.00	11,696.67	1,776.64	1,776.64
20/03/2030	114	1,623.22	111.72	11.70	30.00	10,073.45	1,776.64	1,776.64
20/04/2030	115	1,629.99	106.58	10.07	30.00	8,443.46	1,776.64	1,776.64
20/05/2030	116	1,651.76	86.44	8.44	30.00	6,791.70	1,776.64	1,776.64
20/06/2030	117	1,667.99	71.86	6.79	30.00	5,123.71	1,776.64	1,776.64
20/07/2030	118	1,689.07	52.45	5.12	30.00	3,434.64	1,776.64	1,776.64
20/08/2030	119	1,706.87	36.34	3.43	30.00	1,727.77	1,776.64	1,776.64
20/09/2030	120	1,726.63	18.28	1.73	30.00	0.00	1,777.76	1,777.76
		114,000.00	87,199.83	8,398.09	3,600.00			
							TCEA	15.04%
							TCEM	1.17%

En el Cronograma final, se obtiene un SKU entre ± 1 , finalizando las iteraciones obteniendo el cronograma definitivo, procedemos a hacer un ajuste en la amortización del Capital de la última cuota del cronograma:

Tasa de Costo Efectivo Anual

La tasa del costo efectivo anual (TCEA) del préstamo, la obtenemos de la siguiente manera:

La tasa del costo efectivo anual, considerando la amortización + intereses + seguro de desgravamen + seguro Multirriesgo, asciende a 15.04%
Aplicando las formulas se tiene:

Calcular la tasa del costo efectivo mensual:

TCEM = TIR (rango de flujos)

TCEM = TIR (Fo:Fi)

Realizándose en una hoja de cálculo Excel, mediante la función financiera TIR, donde el flujo de rangos se considera como el valor inicial (Fo) el préstamo otorgado y el valor final (Fi) el monto de cuota del calendario.

TCEM = TIR (-114,000: 1,777.76)

TCEM = 1.17%

Calculo de la tasa del costo efectivo anual (TCEA)

$TCEA = (1 + TCEM)^{12-1}$

$TCEA = (1 + 1.17\%)^{12-1}$

TCEA = 15.04%

II) CASO CREDITO CON PERIODO DE GRACIA

Un cliente solicita crédito hipotecario bajo el producto de crédito Mi Vivienda, para adquirir una vivienda valorizada en S/ 150,000.00, pactando con a una tasa de interés anual de 13% a un plazo de 10 años con un periodo de gracia de 20 días, el bono de buen pagador es de S/ 19,600, la cuota inicial que tiene el cliente es de S/ 16,400.00; asimismo, el prestatario paga el seguro de desgravamen y Multirriesgo.

Valor de la Vivienda : S/ 150,000.00
 Cuota Inicial : (S/ 16,400.00)
 BBP (*) : (S/ 19,600.00)
 MONTO DEL PRESTAMO : **S/ 114,000.00**

(*) Información actualizada sobre el Bono de Buen Pagador en la página web: <https://www.mivivienda.com.pe/>
 Se pide:

- Calcular cuánto es la cuota fija mensual a pagar durante el periodo
- Elaborar el cronograma de pagos.
- Calcular la tasa de costo efectivo anual

Datos:

TEA : 13% (tarifario)
 Préstamo (P) : 114,000
 Suma asegurada : 150,000 (Valor de la garantía)
 Plazo de las cuotas (N) : 120 meses
 Seguro de desgravamen : 0.100% (un titular)
 Seguro Multirriesgo : 0.020%

3. Generación del Cronograma:

Tasa Mensual Seguro de Desgravamen			Tasa Efectiva Mensual Seguro de Desgravamen	TEMSD	0.10005%	Tasa Efectiva Diaria	TED	0.03396%
TEMSD = $[(1 + \text{TEMSD} / 30) ^ (1 / 30) - 1]$			TED = $[(1 + \text{TEM}) ^ (1 / 30) - 1]$					
Tasa Efectiva Mensual Totalizada	TEMTTotal	1.09370%	Tasa Efectiva Diaria Totalizada	TEDTotal	0.03726%			
TEMTTotal = $(\text{TEM} + \text{TEMSD})$			TEDTotal = $[(1 + \text{TEMTTotal}) ^ (1 / 30) - 1]$					
Factor Acumulado	FA	65.2371	Factor Valor Actual Saldo	FVAS	3.9252			
Tasa Mensual Seguro Multirriesgo								
Tasa Efectiva Mensual Seguro multirriesgo	TEMSM	0.02000%						
TEMSM = $[(1 + \text{TMSM} / 30) ^ (1 / 30) - 1]$								

CRONOGRAMA (iteración1):

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
10/10/2020		114,000.00				114,000.00		-114,000.00
09/11/2020	1	-	1,569.33	190.00	30.17	114,000.00	1,789.50	1,789.50
09/12/2020	2	92.07	1,553.26	114.00	30.17	113,907.93	1,789.50	1,789.50
09/01/2021	3	440.27	1,205.15	113.91	30.17	113,467.66	1,789.50	1,789.50
09/02/2021	4	445.37	1,200.49	113.47	30.17	113,022.29	1,789.50	1,789.50
09/03/2021	5	566.80	1,079.51	113.02	30.17	112,455.49	1,789.50	1,789.50
09/04/2021	6	457.09	1,189.78	112.46	30.17	111,998.40	1,789.50	1,789.50
09/05/2021	7	500.80	1,146.53	112.00	30.17	111,497.60	1,789.50	1,789.50
09/06/2021	8	468.18	1,179.65	111.50	30.17	111,029.42	1,789.50	1,789.50
09/07/2021	9	511.69	1,136.61	111.03	30.17	110,517.73	1,789.50	1,789.50
09/08/2021	10	479.53	1,169.28	110.52	30.17	110,038.20	1,789.50	1,789.50
09/09/2021	11	485.08	1,164.21	110.04	30.17	109,553.12	1,789.50	1,789.50
09/10/2021	12	528.28	1,121.50	109.55	30.17	109,024.84	1,789.50	1,789.50

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
09/11/2021	13	496.82	1,153.49	109.02	30.17	108,528.02	1,789.50	1,789.50
09/12/2021	14	539.80	1,111.00	108.53	30.17	107,988.22	1,789.50	1,789.50
09/01/2022	15	508.82	1,142.52	107.99	30.17	107,479.40	1,789.50	1,789.50
09/02/2022	16	514.71	1,137.14	107.48	30.17	106,964.69	1,789.50	1,789.50
09/03/2022	17	630.72	1,021.65	106.96	30.17	106,333.97	1,789.50	1,789.50
09/04/2022	18	527.98	1,125.02	106.33	30.17	105,805.99	1,789.50	1,789.50
09/05/2022	19	570.38	1,083.14	105.81	30.17	105,235.61	1,789.50	1,789.50
09/06/2022	20	540.69	1,113.40	105.24	30.17	104,694.92	1,789.50	1,789.50
09/07/2022	21	582.88	1,071.76	104.69	30.17	104,112.04	1,789.50	1,789.50
09/08/2022	22	553.71	1,101.51	104.11	30.17	103,558.33	1,789.50	1,789.50
09/09/2022	23	560.12	1,095.65	103.56	30.17	102,998.21	1,789.50	1,789.50
09/10/2022	24	601.94	1,054.39	103.00	30.17	102,396.27	1,789.50	1,789.50
09/11/2022	25	573.57	1,083.36	102.40	30.17	101,822.70	1,789.50	1,789.50
09/12/2022	26	615.15	1,042.36	101.82	30.17	101,207.55	1,789.50	1,789.50
09/01/2023	27	587.34	1,070.78	101.21	30.17	100,620.21	1,789.50	1,789.50
09/02/2023	28	594.14	1,064.57	100.62	30.17	100,026.07	1,789.50	1,789.50
09/03/2023	29	703.92	955.38	100.03	30.17	99,322.15	1,789.50	1,789.50
09/04/2023	30	609.18	1,050.83	99.32	30.17	98,712.97	1,789.50	1,789.50
09/05/2023	31	650.10	1,010.52	98.71	30.17	98,062.87	1,789.50	1,789.50
09/06/2023	32	623.76	1,037.51	98.06	30.17	97,439.11	1,789.50	1,789.50
09/07/2023	33	664.41	997.48	97.44	30.17	96,774.70	1,789.50	1,789.50
09/08/2023	34	638.68	1,023.88	96.77	30.17	96,136.02	1,789.50	1,789.50
09/09/2023	35	646.07	1,017.12	96.14	30.17	95,489.95	1,789.50	1,789.50
09/10/2023	36	686.31	977.53	95.49	30.17	94,803.64	1,789.50	1,789.50
09/11/2023	37	661.50	1,003.03	94.80	30.17	94,142.14	1,789.50	1,789.50
09/12/2023	38	701.46	963.73	94.14	30.17	93,440.68	1,789.50	1,789.50
09/01/2024	39	677.28	988.61	93.44	30.17	92,763.40	1,789.50	1,789.50
09/02/2024	40	685.13	981.44	92.76	30.17	92,078.27	1,789.50	1,789.50
09/03/2024	41	756.22	911.03	92.08	30.17	91,322.05	1,789.50	1,789.50
09/04/2024	42	701.82	966.19	91.32	30.17	90,620.23	1,789.50	1,789.50
09/05/2024	43	741.03	927.68	90.62	30.17	89,879.20	1,789.50	1,789.50
09/06/2024	44	718.53	950.92	89.88	30.17	89,160.67	1,789.50	1,789.50
09/07/2024	45	757.43	912.74	89.16	30.17	88,403.24	1,789.50	1,789.50
09/08/2024	46	735.62	935.31	88.40	30.17	87,667.62	1,789.50	1,789.50
09/09/2024	47	744.13	927.53	87.67	30.17	86,923.49	1,789.50	1,789.50
09/10/2024	48	782.57	889.84	86.92	30.17	86,140.92	1,789.50	1,789.50
09/11/2024	49	761.82	911.37	86.14	30.17	85,379.10	1,789.50	1,789.50
09/12/2024	50	799.92	874.03	85.38	30.17	84,579.18	1,789.50	1,789.50
09/01/2025	51	779.90	894.85	84.58	30.17	83,799.28	1,789.50	1,789.50
09/02/2025	52	788.93	886.60	83.80	30.17	83,010.35	1,789.50	1,789.50
09/03/2025	53	883.46	792.86	83.01	30.17	82,126.89	1,789.50	1,789.50
09/04/2025	54	808.29	868.91	82.13	30.17	81,318.60	1,789.50	1,789.50
09/05/2025	55	845.55	832.46	81.32	30.17	80,473.05	1,789.50	1,789.50
09/06/2025	56	827.45	851.41	80.47	30.17	79,645.60	1,789.50	1,789.50
09/07/2025	57	864.35	815.33	79.65	30.17	78,781.25	1,789.50	1,789.50
09/08/2025	58	847.04	833.51	78.78	30.17	77,934.21	1,789.50	1,789.50
09/09/2025	59	856.85	824.55	77.93	30.17	77,077.36	1,789.50	1,789.50
09/10/2025	60	893.21	789.04	77.08	30.17	76,184.15	1,789.50	1,789.50
09/11/2025	61	877.12	806.03	76.18	30.17	75,307.03	1,789.50	1,789.50
09/12/2025	62	913.10	770.92	75.31	30.17	74,393.93	1,789.50	1,789.50
09/01/2026	63	897.85	787.09	74.39	30.17	73,496.08	1,789.50	1,789.50

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
09/02/2026	64	908.24	777.59	73.50	30.17	72,587.84	1,789.50	1,789.50
09/03/2026	65	993.43	693.31	72.59	30.17	71,594.41	1,789.50	1,789.50
09/04/2026	66	930.27	757.47	71.59	30.17	70,664.14	1,789.50	1,789.50
09/05/2026	67	965.28	723.39	70.66	30.17	69,698.86	1,789.50	1,789.50
09/06/2026	68	952.21	737.42	69.70	30.17	68,746.65	1,789.50	1,789.50
09/07/2026	69	986.82	703.76	68.75	30.17	67,759.83	1,789.50	1,789.50
09/08/2026	70	974.67	716.90	67.76	30.17	66,785.16	1,789.50	1,789.50
09/09/2026	71	985.95	706.59	66.79	30.17	65,799.21	1,789.50	1,789.50
09/10/2026	72	1,019.94	673.59	65.80	30.17	64,779.27	1,789.50	1,789.50
09/11/2026	73	1,009.18	685.37	64.78	30.17	63,770.09	1,789.50	1,789.50
09/12/2026	74	1,042.75	652.81	63.77	30.17	62,727.34	1,789.50	1,789.50
09/01/2027	75	1,032.94	663.66	62.73	30.17	61,694.40	1,789.50	1,789.50
09/02/2027	76	1,044.91	652.73	61.69	30.17	60,649.49	1,789.50	1,789.50
09/03/2027	77	1,119.40	579.28	60.65	30.17	59,530.09	1,789.50	1,789.50
09/04/2027	78	1,069.97	629.83	59.53	30.17	58,460.12	1,789.50	1,789.50
09/05/2027	79	1,102.41	598.46	58.46	30.17	57,357.71	1,789.50	1,789.50
09/06/2027	80	1,095.12	606.85	57.36	30.17	56,262.59	1,789.50	1,789.50
09/07/2027	81	1,127.11	575.96	56.26	30.17	55,135.48	1,789.50	1,789.50
09/08/2027	82	1,120.85	583.34	55.14	30.17	54,014.63	1,789.50	1,789.50
09/09/2027	83	1,133.84	571.48	54.01	30.17	52,880.79	1,789.50	1,789.50
09/10/2027	84	1,165.11	541.34	52.88	30.17	51,715.68	1,789.50	1,789.50
09/11/2027	85	1,160.46	547.15	51.72	30.17	50,555.22	1,789.50	1,789.50
09/12/2027	86	1,191.24	517.53	50.56	30.17	49,363.98	1,789.50	1,789.50
09/01/2028	87	1,187.70	522.27	49.36	30.17	48,176.28	1,789.50	1,789.50
09/02/2028	88	1,201.44	509.71	48.18	30.17	46,974.84	1,789.50	1,789.50
09/03/2028	89	1,247.59	464.77	46.97	30.17	45,727.25	1,789.50	1,789.50
09/04/2028	90	1,229.80	483.80	45.73	30.17	44,497.45	1,789.50	1,789.50
09/05/2028	91	1,259.31	455.52	44.50	30.17	43,238.14	1,789.50	1,789.50
09/06/2028	92	1,258.63	457.46	43.24	30.17	41,979.51	1,789.50	1,789.50
09/07/2028	93	1,287.61	429.74	41.98	30.17	40,691.90	1,789.50	1,789.50
09/08/2028	94	1,288.12	430.52	40.69	30.17	39,403.78	1,789.50	1,789.50
09/09/2028	95	1,303.04	416.89	39.40	30.17	38,100.74	1,789.50	1,789.50
09/10/2028	96	1,331.19	390.04	38.10	30.17	36,769.55	1,789.50	1,789.50
09/11/2028	97	1,333.54	389.02	36.77	30.17	35,436.01	1,789.50	1,789.50
09/12/2028	98	1,361.13	362.76	35.44	30.17	34,074.88	1,789.50	1,789.50
09/01/2029	99	1,364.75	360.51	34.07	30.17	32,710.13	1,789.50	1,789.50
09/02/2029	100	1,380.55	346.07	32.71	30.17	31,329.58	1,789.50	1,789.50
09/03/2029	101	1,428.76	299.24	31.33	30.17	29,900.82	1,789.50	1,789.50
09/04/2029	102	1,413.08	316.35	29.90	30.17	28,487.74	1,789.50	1,789.50
09/05/2029	103	1,439.21	291.63	28.49	30.17	27,048.53	1,789.50	1,789.50
09/06/2029	104	1,446.11	286.17	27.05	30.17	25,602.42	1,789.50	1,789.50
09/07/2029	105	1,471.64	262.09	25.60	30.17	24,130.78	1,789.50	1,789.50
09/08/2029	106	1,479.90	255.30	24.13	30.17	22,650.88	1,789.50	1,789.50
09/09/2029	107	1,497.03	239.65	22.65	30.17	21,153.85	1,789.50	1,789.50
09/10/2029	108	1,521.63	216.55	21.15	30.17	19,632.22	1,789.50	1,789.50
09/11/2029	109	1,531.99	207.71	19.63	30.17	18,100.23	1,789.50	1,789.50
09/12/2029	110	1,555.94	185.29	18.10	30.17	16,544.29	1,789.50	1,789.50
09/01/2030	111	1,567.75	175.04	16.54	30.17	14,976.54	1,789.50	1,789.50
09/02/2030	112	1,585.90	158.45	14.98	30.17	13,390.64	1,789.50	1,789.50
09/03/2030	113	1,618.04	127.90	13.39	30.17	11,772.60	1,789.50	1,789.50
09/04/2030	114	1,623.01	124.55	11.77	30.17	10,149.59	1,789.50	1,789.50

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
09/05/2030	115	1,645.28	103.90	10.15	30.17	8,504.31	1,789.50	1,789.50
09/06/2030	116	1,660.85	89.98	8.50	30.17	6,843.46	1,789.50	1,789.50
09/07/2030	117	1,682.43	70.06	6.84	30.17	5,161.03	1,789.50	1,789.50
09/08/2030	118	1,699.57	54.60	5.16	30.17	3,461.46	1,789.50	1,789.50
09/09/2030	119	1,719.25	36.62	3.46	30.17	1,742.21	1,789.50	1,789.50
09/10/2030	120	1,739.75	17.84	1.74	30.17	2.46	1,789.50	1,789.50
		113,997.54	88,588.11	8,533.95	3,620.40			
								TCEA 15.03%
								TCEM 1.17%

Se obtiene un SKU de 2.46 diferente a ± 1 , y se procede a realizar la 2da iteración.

Para ello, calculamos Ajuste por Iteración (AI):

$$AI = [(SKU / FVAS) * (1 / \sum(FA))]$$

$$AI = [(2.46 / 3.9252) * (1 / 65.2371)]$$

$$AI = 0.00$$

El valor calculado se adiciona al Monto Cuota (MC)

$$MC_2 = MC_1 + AI$$

$$MC_2 = 1,789.50 + (2.46)$$

$$MC_2 = 1,791.96$$

Con el Monto Cuota actualizado, se continúa proceso iterativo, generando un nuevo cronograma de pagos hasta encontrar un SKU entre ± 1 o hasta concluir en la iteración número 16:

CRONOGRAMA FINAL:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
10/10/2020		114,000.00				114,000.00		-114,000.00
09/11/2020	1	-	1,569.33	190.00	30.17	114,000.00	1,789.50	1,789.50
09/12/2020	2	92.07	1,553.26	114.00	30.17	113,907.93	1,789.50	1,789.50
09/01/2021	3	440.27	1,205.15	113.91	30.17	113,467.66	1,789.50	1,789.50
09/02/2021	4	445.37	1,200.49	113.47	30.17	113,022.29	1,789.50	1,789.50
09/03/2021	5	566.80	1,079.51	113.02	30.17	112,455.49	1,789.50	1,789.50
09/04/2021	6	457.09	1,189.78	112.46	30.17	111,998.40	1,789.50	1,789.50
09/05/2021	7	500.80	1,146.53	112.00	30.17	111,497.60	1,789.50	1,789.50
09/06/2021	8	468.18	1,179.65	111.50	30.17	111,029.42	1,789.50	1,789.50
09/07/2021	9	511.69	1,136.61	111.03	30.17	110,517.73	1,789.50	1,789.50
09/08/2021	10	479.53	1,169.28	110.52	30.17	110,038.20	1,789.50	1,789.50
09/09/2021	11	485.08	1,164.21	110.04	30.17	109,553.12	1,789.50	1,789.50
09/10/2021	12	528.28	1,121.50	109.55	30.17	109,024.84	1,789.50	1,789.50
09/11/2021	13	496.82	1,153.49	109.02	30.17	108,528.02	1,789.50	1,789.50
09/12/2021	14	539.80	1,111.00	108.53	30.17	107,988.22	1,789.50	1,789.50
09/01/2022	15	508.82	1,142.52	107.99	30.17	107,479.40	1,789.50	1,789.50
09/02/2022	16	514.71	1,137.14	107.48	30.17	106,964.69	1,789.50	1,789.50
09/03/2022	17	630.72	1,021.65	106.96	30.17	106,333.97	1,789.50	1,789.50
09/04/2022	18	527.98	1,125.02	106.33	30.17	105,805.99	1,789.50	1,789.50
09/05/2022	19	570.38	1,083.14	105.81	30.17	105,235.61	1,789.50	1,789.50
09/06/2022	20	540.69	1,113.40	105.24	30.17	104,694.92	1,789.50	1,789.50
09/07/2022	21	582.88	1,071.76	104.69	30.17	104,112.04	1,789.50	1,789.50

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
09/08/2022	22	553.71	1,101.51	104.11	30.17	103,558.33	1,789.50	1,789.50
09/09/2022	23	560.12	1,095.65	103.56	30.17	102,998.21	1,789.50	1,789.50
09/10/2022	24	601.94	1,054.39	103.00	30.17	102,396.27	1,789.50	1,789.50
09/11/2022	25	573.57	1,083.36	102.40	30.17	101,822.70	1,789.50	1,789.50
09/12/2022	26	615.15	1,042.36	101.82	30.17	101,207.55	1,789.50	1,789.50
09/01/2023	27	587.34	1,070.78	101.21	30.17	100,620.21	1,789.50	1,789.50
09/02/2023	28	594.14	1,064.57	100.62	30.17	100,026.07	1,789.50	1,789.50
09/03/2023	29	703.92	955.38	100.03	30.17	99,322.15	1,789.50	1,789.50
09/04/2023	30	609.18	1,050.83	99.32	30.17	98,712.97	1,789.50	1,789.50
09/05/2023	31	650.10	1,010.52	98.71	30.17	98,062.87	1,789.50	1,789.50
09/06/2023	32	623.76	1,037.51	98.06	30.17	97,439.11	1,789.50	1,789.50
09/07/2023	33	664.41	997.48	97.44	30.17	96,774.70	1,789.50	1,789.50
09/08/2023	34	638.68	1,023.88	96.77	30.17	96,136.02	1,789.50	1,789.50
09/09/2023	35	646.07	1,017.12	96.14	30.17	95,489.95	1,789.50	1,789.50
09/10/2023	36	686.31	977.53	95.49	30.17	94,803.64	1,789.50	1,789.50
09/11/2023	37	661.50	1,003.03	94.80	30.17	94,142.14	1,789.50	1,789.50
09/12/2023	38	701.46	963.73	94.14	30.17	93,440.68	1,789.50	1,789.50
09/01/2024	39	677.28	988.61	93.44	30.17	92,763.40	1,789.50	1,789.50
09/02/2024	40	685.13	981.44	92.76	30.17	92,078.27	1,789.50	1,789.50
09/03/2024	41	756.22	911.03	92.08	30.17	91,322.05	1,789.50	1,789.50
09/04/2024	42	701.82	966.19	91.32	30.17	90,620.23	1,789.50	1,789.50
09/05/2024	43	741.03	927.68	90.62	30.17	89,879.20	1,789.50	1,789.50
09/06/2024	44	718.53	950.92	89.88	30.17	89,160.67	1,789.50	1,789.50
09/07/2024	45	757.43	912.74	89.16	30.17	88,403.24	1,789.50	1,789.50
09/08/2024	46	735.62	935.31	88.40	30.17	87,667.62	1,789.50	1,789.50
09/09/2024	47	744.13	927.53	87.67	30.17	86,923.49	1,789.50	1,789.50
09/10/2024	48	782.57	889.84	86.92	30.17	86,140.92	1,789.50	1,789.50
09/11/2024	49	761.82	911.37	86.14	30.17	85,379.10	1,789.50	1,789.50
09/12/2024	50	799.92	874.03	85.38	30.17	84,579.18	1,789.50	1,789.50
09/01/2025	51	779.90	894.85	84.58	30.17	83,799.28	1,789.50	1,789.50
09/02/2025	52	788.93	886.60	83.80	30.17	83,010.35	1,789.50	1,789.50
09/03/2025	53	883.46	792.86	83.01	30.17	82,126.89	1,789.50	1,789.50
09/04/2025	54	808.29	868.91	82.13	30.17	81,318.60	1,789.50	1,789.50
09/05/2025	55	845.55	832.46	81.32	30.17	80,473.05	1,789.50	1,789.50
09/06/2025	56	827.45	851.41	80.47	30.17	79,645.60	1,789.50	1,789.50
09/07/2025	57	864.35	815.33	79.65	30.17	78,781.25	1,789.50	1,789.50
09/08/2025	58	847.04	833.51	78.78	30.17	77,934.21	1,789.50	1,789.50
09/09/2025	59	856.85	824.55	77.93	30.17	77,077.36	1,789.50	1,789.50
09/10/2025	60	893.21	789.04	77.08	30.17	76,184.15	1,789.50	1,789.50
09/11/2025	61	877.12	806.03	76.18	30.17	75,307.03	1,789.50	1,789.50
09/12/2025	62	913.10	770.92	75.31	30.17	74,393.93	1,789.50	1,789.50
09/01/2026	63	897.85	787.09	74.39	30.17	73,496.08	1,789.50	1,789.50
09/02/2026	64	908.24	777.59	73.50	30.17	72,587.84	1,789.50	1,789.50
09/03/2026	65	993.43	693.31	72.59	30.17	71,594.41	1,789.50	1,789.50
09/04/2026	66	930.27	757.47	71.59	30.17	70,664.14	1,789.50	1,789.50
09/05/2026	67	965.28	723.39	70.66	30.17	69,698.86	1,789.50	1,789.50
09/06/2026	68	952.21	737.42	69.70	30.17	68,746.65	1,789.50	1,789.50
09/07/2026	69	986.82	703.76	68.75	30.17	67,759.83	1,789.50	1,789.50
09/08/2026	70	974.67	716.90	67.76	30.17	66,785.16	1,789.50	1,789.50
09/09/2026	71	985.95	706.59	66.79	30.17	65,799.21	1,789.50	1,789.50
09/10/2026	72	1,019.94	673.59	65.80	30.17	64,779.27	1,789.50	1,789.50

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total	Flujo
09/11/2026	73	1,009.18	685.37	64.78	30.17	63,770.09	1,789.50	1,789.50
09/12/2026	74	1,042.75	652.81	63.77	30.17	62,727.34	1,789.50	1,789.50
09/01/2027	75	1,032.94	663.66	62.73	30.17	61,694.40	1,789.50	1,789.50
09/02/2027	76	1,044.91	652.73	61.69	30.17	60,649.49	1,789.50	1,789.50
09/03/2027	77	1,119.40	579.28	60.65	30.17	59,530.09	1,789.50	1,789.50
09/04/2027	78	1,069.97	629.83	59.53	30.17	58,460.12	1,789.50	1,789.50
09/05/2027	79	1,102.41	598.46	58.46	30.17	57,357.71	1,789.50	1,789.50
09/06/2027	80	1,095.12	606.85	57.36	30.17	56,262.59	1,789.50	1,789.50
09/07/2027	81	1,127.11	575.96	56.26	30.17	55,135.48	1,789.50	1,789.50
09/08/2027	82	1,120.85	583.34	55.14	30.17	54,014.63	1,789.50	1,789.50
09/09/2027	83	1,133.84	571.48	54.01	30.17	52,880.79	1,789.50	1,789.50
09/10/2027	84	1,165.11	541.34	52.88	30.17	51,715.68	1,789.50	1,789.50
09/11/2027	85	1,160.46	547.15	51.72	30.17	50,555.22	1,789.50	1,789.50
09/12/2027	86	1,191.24	517.53	50.56	30.17	49,363.98	1,789.50	1,789.50
09/01/2028	87	1,187.70	522.27	49.36	30.17	48,176.28	1,789.50	1,789.50
09/02/2028	88	1,201.44	509.71	48.18	30.17	46,974.84	1,789.50	1,789.50
09/03/2028	89	1,247.59	464.77	46.97	30.17	45,727.25	1,789.50	1,789.50
09/04/2028	90	1,229.80	483.80	45.73	30.17	44,497.45	1,789.50	1,789.50
09/05/2028	91	1,259.31	455.52	44.50	30.17	43,238.14	1,789.50	1,789.50
09/06/2028	92	1,258.63	457.46	43.24	30.17	41,979.51	1,789.50	1,789.50
09/07/2028	93	1,287.61	429.74	41.98	30.17	40,691.90	1,789.50	1,789.50
09/08/2028	94	1,288.12	430.52	40.69	30.17	39,403.78	1,789.50	1,789.50
09/09/2028	95	1,303.04	416.89	39.40	30.17	38,100.74	1,789.50	1,789.50
09/10/2028	96	1,331.19	390.04	38.10	30.17	36,769.55	1,789.50	1,789.50
09/11/2028	97	1,333.54	389.02	36.77	30.17	35,436.01	1,789.50	1,789.50
09/12/2028	98	1,361.13	362.76	35.44	30.17	34,074.88	1,789.50	1,789.50
09/01/2029	99	1,364.75	360.51	34.07	30.17	32,710.13	1,789.50	1,789.50
09/02/2029	100	1,380.55	346.07	32.71	30.17	31,329.58	1,789.50	1,789.50
09/03/2029	101	1,428.76	299.24	31.33	30.17	29,900.82	1,789.50	1,789.50
09/04/2029	102	1,413.08	316.35	29.90	30.17	28,487.74	1,789.50	1,789.50
09/05/2029	103	1,439.21	291.63	28.49	30.17	27,048.53	1,789.50	1,789.50
09/06/2029	104	1,446.11	286.17	27.05	30.17	25,602.42	1,789.50	1,789.50
09/07/2029	105	1,471.64	262.09	25.60	30.17	24,130.78	1,789.50	1,789.50
09/08/2029	106	1,479.90	255.30	24.13	30.17	22,650.88	1,789.50	1,789.50
09/09/2029	107	1,497.03	239.65	22.65	30.17	21,153.85	1,789.50	1,789.50
09/10/2029	108	1,521.63	216.55	21.15	30.17	19,632.22	1,789.50	1,789.50
09/11/2029	109	1,531.99	207.71	19.63	30.17	18,100.23	1,789.50	1,789.50
09/12/2029	110	1,555.94	185.29	18.10	30.17	16,544.29	1,789.50	1,789.50
09/01/2030	111	1,567.75	175.04	16.54	30.17	14,976.54	1,789.50	1,789.50
09/02/2030	112	1,585.90	158.45	14.98	30.17	13,390.64	1,789.50	1,789.50
09/03/2030	113	1,618.04	127.90	13.39	30.17	11,772.60	1,789.50	1,789.50
09/04/2030	114	1,623.01	124.55	11.77	30.17	10,149.59	1,789.50	1,789.50
09/05/2030	115	1,645.28	103.90	10.15	30.17	8,504.31	1,789.50	1,789.50
09/06/2030	116	1,660.85	89.98	8.50	30.17	6,843.46	1,789.50	1,789.50
09/07/2030	117	1,682.43	70.06	6.84	30.17	5,161.03	1,789.50	1,789.50
09/08/2030	118	1,699.57	54.60	5.16	30.17	3,461.46	1,789.50	1,789.50
09/09/2030	119	1,719.25	36.62	3.46	30.17	1,742.21	1,789.50	1,789.50
09/10/2030	120	1,742.21	17.84	1.74	30.17	0.00	1,791.96	1,791.96
		113,997.54	88,588.11	8,533.95	3,620.40			
								TCEA 15.03%
								TCEM 1.17%

En el Cronograma final, se obtiene un SKU entre ± 1 , finalizando las iteraciones obteniendo el cronograma definitivo, procedemos a hacer un ajuste en la amortización del Capital de la última cuota del cronograma:

Tasa de Costo Efectivo Anual

La tasa del costo efectivo anual (TCEA) del préstamo, la obtenemos de la siguiente manera:

La tasa del costo efectivo anual, considerando la amortización + intereses + seguro de desgravamen + seguro Multirriesgo, asciende a 17.53%

Aplicando las formulas se tiene:

Calcular la tasa del costo efectivo mensual:

TCEM = TIR (rango de flujos)

TCEM = TIR (Fo:Fi)

Realizándose en una hoja de cálculo Excel, mediante la función financiera TIR, donde el flujo de rangos se considera como el valor inicial (Fo) el préstamo otorgado y el valor final (Fi) el monto de cuota del calendario.

TCEM = TIR (-114,000: 1,791.96)

TCEM = 1.17%

Calculo de la tasa del costo efectivo anual (TCEA)

$TCEA = (1 + TCEM)^{12-1}$

$TCEA = (1 + 1.17\%)^{12-1}$

TCEA = 15.03%

III) CASO EN INCUMPLIMIENTO

a) Interés moratorio

Cuando una cuota no es pagada en la fecha de vencimiento se cobra adicional a la cuota del periodo los siguientes conceptos:

- Interés por Pago Diferido: interés compensatorio que resulta de aplicar la tasa de interés compensatoria efectiva diaria sobre el capital e interés de la(s) cuota(s) atrasada(s).
- Mora: penalidad resultante de aplicar la tasa moratoria diaria sobre el capital e interés de la(s) cuota(s) atrasada(s).

Del ejemplo anterior, el cliente se atrasa 20 días en el pago de la cuota N° 06, se pide calcular el total el interés moratorio aplicable por el tiempo de morosidad.

Fórmula de Interés Moratorio:

$$IM = TIMD * D * CV$$

Donde:

IM: Interés moratorio

TIM: Tasa de Interés moratorio diario

D: días de atraso

CV : Cuota vencida (Saldo capital + intereses)

Calculamos Tasa Interés Moratoria diaria a partir de la TEA:

$$\begin{aligned} \text{TIMD} &= (1 + \text{TEA})^{1/360} - 1 \\ \text{TIMD} &= (1 + 185\%)^{1/360} - 1 \\ \text{TIMD} &= 0.29135\% \end{aligned}$$

Igualmente, se calcula la Tasa Interés Moratoria expresada en tasa nominal diaria (TND), a partir de la TNA, conociendo la TEA:

$$\begin{aligned} \text{TNA} &= ((1 + \text{TEA})^{1/360} - 1) \times 360 & \Rightarrow & \text{TND} = \text{TNA} / 360 \\ \text{TNA} &= ((1 + 185\%)^{1/360} - 1) \times 360 & & \text{TND} = 104.8844 / 360 \\ \text{TNA} &= 104.8844\% & & \text{TND} = 0.29135\% \end{aligned}$$

Cálculo de interés moratorio:

$$\text{IM} = \text{TIMD} \times D \times \text{CV}$$

$$\text{IM} = 0.29135\% \times 20 \times 1,646.87$$

$$\text{IM} = \text{S/ } 95.96$$

b) Interés compensatorio por días de atraso

Es el interés compensatorio que resulta de aplicar la tasa de interés compensatoria (pactada) por los días de atraso y aplicada sobre el capital e intereses de la cuota(s) atrasada(s).

Del ejemplo anterior, el cliente se atrasa 20 días en el pago de la cuota N° 06, se pide calcular el total el interés compensatorio por días de atraso aplicable por el tiempo de morosidad.

Fórmula de Interés Compensatorio por días de atraso:

$$\text{ICV} = (((1 + \text{TEA})^{n/360}) - 1) \times (\text{SCC} + \text{ICC})$$

Donde:

ICV: Interés compensatorio por días de atraso

TEA: Tasa efectiva anual (23.87%)

N: días de atraso

SCC : Saldo capital de la cuota

ICC: Interés compensatorio de la cuota

$$\text{ICV} = (((1 + \text{TEA})^{n/360}) - 1) \times (\text{SCC} + \text{ICC})$$

$$\text{ICV} = ((1 + 185\%)^{20/360} - 1) \times (457.09 + 1,189.78)$$

Aplicando hoja de cálculo Excel:

$$\text{ICV} = ((1 + 185.00\%)^{20/360} - 1) \times (457.09 + 1,189.78)$$

$$\text{ICV} = \text{S/ } 98.66$$

Resumen:

Cuota N°	6
Capital de la cuota	457.09
Interés de la cuota	1,189.78
Cuota del mes	1,646.87
Seguro desgravamen	112.46
Seguro Multirriesgo	30.17
Cuota Total a pagar según calendario	1,789.50
Días de atraso	20 días
Interés Moratorio	95.96
Interés compensatorio por días de atraso	98.66
Total a pagar incluido interés moratorio (incluyendo la mora de 20 días de atraso)	1,984.12

El cliente deberá pagar S/ 95.96 por interés moratorio y S/ 98.66 por interés compensatorio por días de atraso por los 20 días, y el monto total a pagar será de S/ 1,984.12.

IV) CANCELACIÓN ANTICIPADA TOTAL O PARCIAL DEL CRÉDITO HIPOTECARIO MIVIVIENDA

Se podrá efectuar el prepago parcial o total del subpréstamo. El importe del prepago del subpréstamo deberá ser utilizado por la IFI para efectuar el prepago del préstamo a favor del Fiduciario en representación de EL FONDO, contando para ello con un plazo de hasta 20 días calendario contados a partir de la fecha en que se efectuó la pre cancelación.

Acuerdo de Pago

Se permite un Acuerdo de Pago como alternativa al remate del inmueble para liquidar la CRC, previa aprobación de EL FONDO, en las siguientes modalidades:

- Pago en efectivo: Se tendrá que cancelar el total del adeudado.
- La Dación de Pago del bien financiado por parte del subprestatario previa aprobación de EL FONDO, y siempre que el integro de la recuperación se destine a la cancelación de la deuda.

Si un cliente desea realizar una cancelación anticipada total de su crédito, deberá pagar el saldo de capital que adeuda más los intereses que se han generado, por los días que han transcurrido entre la fecha de vencimiento de su cuota anterior y la fecha del pago de la liquidación del préstamo. Los intereses compensatorios transcurridos se calculan de acuerdo a la fórmula del interés compensatorio.

Considerando como referencia el ejemplo anterior:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/09/2020		114,000.00				114,000.00		-
20/10/2020	1	465.62	1,167.02	114.00	30.00	113,534.38	1,776.64	1,776.64
20/11/2020	2	431.91	1,201.20	113.53	30.00	113,102.47	1,776.64	1,776.64
20/12/2020	3	475.71	1,157.83	113.10	30.00	112,626.76	1,776.64	1,776.64
20/01/2021	4	442.42	1,191.59	112.63	30.00	112,184.34	1,776.64	1,776.64
20/02/2021	5	447.55	1,186.91	112.18	30.00	111,736.79	1,776.64	1,776.64
20/03/2021	6	567.67	1,067.23	111.74	30.00	111,169.12	1,776.64	1,776.64
20/04/2021	7	459.30	1,176.17	111.17	30.00	110,709.82	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/05/2021	8	502.59	1,133.34	110.71	30.00	110,207.23	1,776.64	1,776.64
20/06/2021	9	470.43	1,166.00	110.21	30.00	109,736.80	1,776.64	1,776.64
20/07/2021	10	513.52	1,123.38	109.74	30.00	109,223.28	1,776.64	1,776.64
20/08/2021	11	481.83	1,155.59	109.22	30.00	108,741.45	1,776.64	1,776.64
20/09/2021	12	487.41	1,150.49	108.74	30.00	108,254.05	1,776.64	1,776.64
20/10/2021	13	530.19	1,108.20	108.25	30.00	107,723.86	1,776.64	1,776.64
20/11/2021	14	499.20	1,139.72	107.72	30.00	107,224.66	1,776.64	1,776.64
20/12/2021	15	541.76	1,097.66	107.22	30.00	106,682.90	1,776.64	1,776.64
20/01/2022	16	511.25	1,128.71	106.68	30.00	106,171.65	1,776.64	1,776.64
20/02/2022	17	517.17	1,123.30	106.17	30.00	105,654.48	1,776.64	1,776.64
20/03/2022	18	631.85	1,009.14	105.65	30.00	105,022.63	1,776.64	1,776.64
20/04/2022	19	530.48	1,111.14	105.02	30.00	104,492.15	1,776.64	1,776.64
20/05/2022	20	572.46	1,069.69	104.49	30.00	103,919.69	1,776.64	1,776.64
20/06/2022	21	543.25	1,099.47	103.92	30.00	103,376.44	1,776.64	1,776.64
20/07/2022	22	585.00	1,058.26	103.38	30.00	102,791.44	1,776.64	1,776.64
20/08/2022	23	556.31	1,087.54	102.79	30.00	102,235.13	1,776.64	1,776.64
20/09/2022	24	562.75	1,081.65	102.24	30.00	101,672.38	1,776.64	1,776.64
20/10/2022	25	604.15	1,040.82	101.67	30.00	101,068.23	1,776.64	1,776.64
20/11/2022	26	576.26	1,069.31	101.07	30.00	100,491.97	1,776.64	1,776.64
20/12/2022	27	617.41	1,028.74	100.49	30.00	99,874.56	1,776.64	1,776.64
20/01/2023	28	590.09	1,056.68	99.87	30.00	99,284.47	1,776.64	1,776.64
20/02/2023	29	596.93	1,050.43	99.28	30.00	98,687.54	1,776.64	1,776.64
20/03/2023	30	705.36	942.59	98.69	30.00	97,982.18	1,776.64	1,776.64
20/04/2023	31	612.01	1,036.65	97.98	30.00	97,370.17	1,776.64	1,776.64
20/05/2023	32	652.49	996.78	97.37	30.00	96,717.68	1,776.64	1,776.64
20/06/2023	33	626.64	1,023.28	96.72	30.00	96,091.04	1,776.64	1,776.64
20/07/2023	34	666.87	983.68	96.09	30.00	95,424.17	1,776.64	1,776.64
20/08/2023	35	641.63	1,009.59	95.42	30.00	94,782.54	1,776.64	1,776.64
20/09/2023	36	649.06	1,002.80	94.78	30.00	94,133.48	1,776.64	1,776.64
20/10/2023	37	688.87	963.64	94.13	30.00	93,444.61	1,776.64	1,776.64
20/11/2023	38	664.55	988.65	93.44	30.00	92,780.06	1,776.64	1,776.64
20/12/2023	39	704.07	949.79	92.78	30.00	92,075.99	1,776.64	1,776.64
20/01/2024	40	680.39	974.17	92.08	30.00	91,395.60	1,776.64	1,776.64
20/02/2024	41	688.27	966.97	91.40	30.00	90,707.33	1,776.64	1,776.64
20/03/2024	42	758.46	897.47	90.71	30.00	89,948.87	1,776.64	1,776.64
20/04/2024	43	705.03	951.66	89.95	30.00	89,243.84	1,776.64	1,776.64
20/05/2024	44	743.81	913.59	89.24	30.00	88,500.03	1,776.64	1,776.64
20/06/2024	45	721.81	936.33	88.50	30.00	87,778.22	1,776.64	1,776.64
20/07/2024	46	760.27	898.59	87.78	30.00	87,017.95	1,776.64	1,776.64
20/08/2024	47	738.97	920.65	87.02	30.00	86,278.98	1,776.64	1,776.64
20/09/2024	48	747.53	912.83	86.28	30.00	85,531.45	1,776.64	1,776.64
20/10/2024	49	785.52	875.59	85.53	30.00	84,745.93	1,776.64	1,776.64
20/11/2024	50	765.28	896.61	84.75	30.00	83,980.65	1,776.64	1,776.64
20/12/2024	51	802.95	859.71	83.98	30.00	83,177.70	1,776.64	1,776.64
20/01/2025	52	783.44	880.02	83.18	30.00	82,394.26	1,776.64	1,776.64
20/02/2025	53	792.52	871.73	82.39	30.00	81,601.74	1,776.64	1,776.64
20/03/2025	54	885.64	779.40	81.60	30.00	80,716.10	1,776.64	1,776.64
20/04/2025	55	811.94	853.98	80.72	30.00	79,904.16	1,776.64	1,776.64
20/05/2025	56	848.76	817.98	79.90	30.00	79,055.40	1,776.64	1,776.64
20/06/2025	57	831.17	836.41	79.06	30.00	78,224.23	1,776.64	1,776.64
20/07/2025	58	867.64	800.78	78.22	30.00	77,356.59	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/08/2025	59	850.84	818.44	77.36	30.00	76,505.75	1,776.64	1,776.64
20/09/2025	60	860.70	809.43	76.51	30.00	75,645.05	1,776.64	1,776.64
20/10/2025	61	896.61	774.38	75.65	30.00	74,748.44	1,776.64	1,776.64
20/11/2025	62	881.05	790.84	74.75	30.00	73,867.39	1,776.64	1,776.64
20/12/2025	63	916.59	756.18	73.87	30.00	72,950.80	1,776.64	1,776.64
20/01/2026	64	901.87	771.82	72.95	30.00	72,048.93	1,776.64	1,776.64
20/02/2026	65	912.31	762.28	72.05	30.00	71,136.62	1,776.64	1,776.64
20/03/2026	66	996.05	679.45	71.14	30.00	70,140.57	1,776.64	1,776.64
20/04/2026	67	934.41	742.09	70.14	30.00	69,206.16	1,776.64	1,776.64
20/05/2026	68	968.97	708.46	69.21	30.00	68,237.19	1,776.64	1,776.64
20/06/2026	69	956.45	721.95	68.24	30.00	67,280.74	1,776.64	1,776.64
20/07/2026	70	990.61	688.75	67.28	30.00	66,290.13	1,776.64	1,776.64
20/08/2026	71	979.00	701.35	66.29	30.00	65,311.13	1,776.64	1,776.64
20/09/2026	72	990.34	690.99	65.31	30.00	64,320.79	1,776.64	1,776.64
20/10/2026	73	1,023.87	658.45	64.32	30.00	63,296.92	1,776.64	1,776.64
20/11/2026	74	1,013.66	669.68	63.30	30.00	62,283.26	1,776.64	1,776.64
20/12/2026	75	1,046.77	637.59	62.28	30.00	61,236.49	1,776.64	1,776.64
20/01/2027	76	1,037.52	647.88	61.24	30.00	60,198.97	1,776.64	1,776.64
20/02/2027	77	1,049.53	636.91	60.20	30.00	59,149.44	1,776.64	1,776.64
20/03/2027	78	1,122.54	564.95	59.15	30.00	58,026.90	1,776.64	1,776.64
20/04/2027	79	1,074.68	613.93	58.03	30.00	56,952.22	1,776.64	1,776.64
20/05/2027	80	1,106.67	583.02	56.95	30.00	55,845.55	1,776.64	1,776.64
20/06/2027	81	1,099.94	590.85	55.85	30.00	54,745.61	1,776.64	1,776.64
20/07/2027	82	1,131.46	560.43	54.75	30.00	53,614.15	1,776.64	1,776.64
20/08/2027	83	1,125.79	567.24	53.61	30.00	52,488.36	1,776.64	1,776.64
20/09/2027	84	1,138.82	555.33	52.49	30.00	51,349.54	1,776.64	1,776.64
20/10/2027	85	1,169.62	525.67	51.35	30.00	50,179.92	1,776.64	1,776.64
20/11/2027	86	1,165.55	530.91	50.18	30.00	49,014.37	1,776.64	1,776.64
20/12/2027	87	1,195.87	501.76	49.01	30.00	47,818.50	1,776.64	1,776.64
20/01/2028	88	1,192.90	505.92	47.82	30.00	46,625.60	1,776.64	1,776.64
20/02/2028	89	1,206.71	493.30	46.63	30.00	45,418.89	1,776.64	1,776.64
20/03/2028	90	1,251.84	449.38	45.42	30.00	44,167.05	1,776.64	1,776.64
20/04/2028	91	1,235.18	467.29	44.17	30.00	42,931.87	1,776.64	1,776.64
20/05/2028	92	1,264.22	439.49	42.93	30.00	41,667.65	1,776.64	1,776.64
20/06/2028	93	1,264.12	440.85	41.67	30.00	40,403.53	1,776.64	1,776.64
20/07/2028	94	1,292.63	413.61	40.40	30.00	39,110.90	1,776.64	1,776.64
20/08/2028	95	1,293.74	413.79	39.11	30.00	37,817.16	1,776.64	1,776.64
20/09/2028	96	1,308.71	400.11	37.82	30.00	36,508.45	1,776.64	1,776.64
20/10/2028	97	1,336.39	373.74	36.51	30.00	35,172.06	1,776.64	1,776.64
20/11/2028	98	1,339.35	372.12	35.17	30.00	33,832.71	1,776.64	1,776.64
20/12/2028	99	1,366.46	346.35	33.83	30.00	32,466.25	1,776.64	1,776.64
20/01/2029	100	1,370.68	343.49	32.47	30.00	31,095.57	1,776.64	1,776.64
20/02/2029	101	1,386.55	328.99	31.10	30.00	29,709.02	1,776.64	1,776.64
20/03/2029	102	1,433.17	283.76	29.71	30.00	28,275.85	1,776.64	1,776.64
20/04/2029	103	1,419.20	299.16	28.28	30.00	26,856.65	1,776.64	1,776.64
20/05/2029	104	1,444.85	274.93	26.86	30.00	25,411.80	1,776.64	1,776.64
20/06/2029	105	1,452.37	268.86	25.41	30.00	23,959.43	1,776.64	1,776.64
20/07/2029	106	1,477.41	245.27	23.96	30.00	22,482.02	1,776.64	1,776.64
20/08/2029	107	1,486.30	237.86	22.48	30.00	20,995.72	1,776.64	1,776.64
20/09/2029	108	1,503.50	222.14	21.00	30.00	19,492.22	1,776.64	1,776.64
20/10/2029	109	1,527.61	199.54	19.49	30.00	17,964.61	1,776.64	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Flujo
20/11/2029	110	1,538.61	190.07	17.96	30.00	16,426.00	1,776.64	1,776.64
20/12/2029	111	1,562.06	168.15	16.43	30.00	14,863.94	1,776.64	1,776.64
20/01/2030	112	1,574.52	157.26	14.86	30.00	13,289.42	1,776.64	1,776.64
20/02/2030	113	1,592.75	140.60	13.29	30.00	11,696.67	1,776.64	1,776.64
20/03/2030	114	1,623.22	111.72	11.70	30.00	10,073.45	1,776.64	1,776.64
20/04/2030	115	1,629.99	106.58	10.07	30.00	8,443.46	1,776.64	1,776.64
20/05/2030	116	1,651.76	86.44	8.44	30.00	6,791.70	1,776.64	1,776.64
20/06/2030	117	1,667.99	71.86	6.79	30.00	5,123.71	1,776.64	1,776.64
20/07/2030	118	1,689.07	52.45	5.12	30.00	3,434.64	1,776.64	1,776.64
20/08/2030	119	1,706.87	36.34	3.43	30.00	1,727.77	1,776.64	1,776.64
20/09/2030	120	1,726.63	18.28	1.73	30.00	0.00	1,777.76	1,777.76
		114,000.00	87,199.83	8,398.09	3,600.00			
								TCEA 15.04%
								TCEM 1.17%

Datos del préstamo

Monto	: S/ 114,000.00
Plazo	: 120 meses
Tasa Efectiva Anual (TEA)	: 13%
Suma asegurada	: 150,000 (Valor de la garantía)
Seguro de desgravamen	: 0.100%
Seguro Multirriesgo	: 0.020%
Monto de cuota	: S/ 1,776.64
Fecha de desembolso	: 20 de setiembre de 2020
Última fecha de pago	: 20 de enero de 2021 (4ta. Cuota)
Pago anticipado	: 05 de febrero de 2021 por el monto de S/ 25,000.00 (Transcurrido 16 días, desde su última fecha de pago)

i) Cálculo de interés compensatorio por los 16 días transcurridos:

$$IC = SK * (1 + TEA)^{ADT/360} - 1$$

$$IC = 112,184.34 * (1 + 0.13)^{16/360} - 1$$

$$IC = \text{S/ } 611.03$$

ii) Cálculo de comisiones y gastos:

En este caso se cobra al cliente el monto de seguro de desgravamen y seguro Multirriesgo que se registra en el cronograma de pagos:

$$SD_{Cuota(05)} = \text{S/ } 112.18$$

$$SM_{Cuota(05)} = \text{S/ } 30.00$$

iii) APLICACIÓN DEL PAGO ANTICIPADO PARCIAL

Monto entregado por el cliente	S/ 25,000.00
(-) Interés a cobrar	(S/ 611.03)
(-) Seguro de desgravamen	(S/ 112.18)
(-) Seguro Multirriesgo	(S/ 30.00)
Monto a aplicar a saldo capital	S/ 24,246.79

Entonces el saldo capital para el nuevo cronograma que se emitirá por el pago anticipado parcial es de S/ 87,937.55 (saldo capital al momento de la operación S/ 112,184.34 menos la amortización por pago anticipado parcial S/ 24,246.79).

Pago hasta 4ta. Cuota (saldo de capital)	S/ 112,184.34
(-) Amortización	(S/ 24,246.79)
Saldo capital para nuevo cronograma	S/ 87,937.55

El cliente elige la opción de reducir el monto de cuota, manteniendo el plazo del número de cuotas pactadas:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total
05/02/2021		87,937.55				87,937.55	
20/02/2021	1	940.98	448.96	-	-	86,996.57	1,389.94
20/03/2021	2	442.01	830.93	87.00	30.00	86,554.56	1,389.94
20/04/2021	3	357.64	915.75	86.55	30.00	86,196.92	1,389.94
20/05/2021	4	391.34	882.40	86.20	30.00	85,805.58	1,389.94
20/06/2021	5	366.30	907.83	85.81	30.00	85,439.28	1,389.94
20/07/2021	6	399.86	874.64	85.44	30.00	85,039.42	1,389.94
20/08/2021	7	375.18	899.72	85.04	30.00	84,664.24	1,389.94
20/09/2021	8	379.53	895.75	84.66	30.00	84,284.71	1,389.94
20/10/2021	9	412.84	862.82	84.28	30.00	83,871.87	1,389.94
20/11/2021	10	388.70	887.37	83.87	30.00	83,483.17	1,389.94
20/12/2021	11	421.84	854.62	83.48	30.00	83,061.33	1,389.94
20/01/2022	12	398.09	878.79	83.06	30.00	82,663.24	1,389.94
20/02/2022	13	402.70	874.58	82.66	30.00	82,260.54	1,389.94
20/03/2022	14	491.99	785.69	82.26	30.00	81,768.55	1,389.94
20/04/2022	15	413.06	865.11	81.77	30.00	81,355.49	1,389.94
20/05/2022	16	445.74	832.84	81.36	30.00	80,909.75	1,389.94
20/06/2022	17	423.00	856.03	80.91	30.00	80,486.75	1,389.94
20/07/2022	18	455.51	823.94	80.49	30.00	80,031.24	1,389.94
20/08/2022	19	433.18	846.73	80.03	30.00	79,598.06	1,389.94
20/09/2022	20	438.19	842.15	79.60	30.00	79,159.87	1,389.94
20/10/2022	21	470.42	810.36	79.16	30.00	78,689.45	1,389.94
20/11/2022	22	448.71	832.54	78.69	30.00	78,240.74	1,389.94
20/12/2022	23	480.75	800.95	78.24	30.00	77,759.99	1,389.94
20/01/2023	24	459.48	822.70	77.76	30.00	77,300.51	1,389.94
20/02/2023	25	464.80	817.84	77.30	30.00	76,835.71	1,389.94
20/03/2023	26	549.22	733.88	76.84	30.00	76,286.49	1,389.94
20/04/2023	27	476.54	807.11	76.29	30.00	75,809.95	1,389.94
20/05/2023	28	508.06	776.07	75.81	30.00	75,301.89	1,389.94
20/06/2023	29	487.94	796.70	75.30	30.00	74,813.95	1,389.94
20/07/2023	30	519.26	765.87	74.81	30.00	74,294.69	1,389.94
20/08/2023	31	499.61	786.04	74.29	30.00	73,795.08	1,389.94
20/09/2023	32	505.39	780.75	73.80	30.00	73,289.69	1,389.94
20/10/2023	33	536.38	750.27	73.29	30.00	72,753.31	1,389.94
20/11/2023	34	517.46	769.73	72.75	30.00	72,235.85	1,389.94
20/12/2023	35	548.22	739.48	72.24	30.00	71,687.63	1,389.94
20/01/2024	36	529.79	758.46	71.69	30.00	71,157.84	1,389.94
20/02/2024	37	535.93	752.85	71.16	30.00	70,621.91	1,389.94
20/03/2024	38	590.58	698.74	70.62	30.00	70,031.33	1,389.94

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total
20/04/2024	39	548.98	740.93	70.03	30.00	69,482.35	1,389.94
20/05/2024	40	579.17	711.29	69.48	30.00	68,903.18	1,389.94
20/06/2024	41	562.04	729.00	68.90	30.00	68,341.14	1,389.94
20/07/2024	42	591.99	699.61	68.34	30.00	67,749.15	1,389.94
20/08/2024	43	575.40	716.79	67.75	30.00	67,173.75	1,389.94
20/09/2024	44	582.07	710.70	67.17	30.00	66,591.68	1,389.94
20/10/2024	45	611.65	681.70	66.59	30.00	65,980.03	1,389.94
20/11/2024	46	595.89	698.07	65.98	30.00	65,384.14	1,389.94
20/12/2024	47	625.22	669.34	65.38	30.00	64,758.92	1,389.94
20/01/2025	48	610.03	685.15	64.76	30.00	64,148.89	1,389.94
20/02/2025	49	617.09	678.70	64.15	30.00	63,531.80	1,389.94
20/03/2025	50	689.60	606.81	63.53	30.00	62,842.20	1,389.94
20/04/2025	51	632.23	664.87	62.84	30.00	62,209.97	1,389.94
20/05/2025	52	660.89	636.84	62.21	30.00	61,549.08	1,389.94
20/06/2025	53	647.20	651.19	61.55	30.00	60,901.88	1,389.94
20/07/2025	54	675.59	623.45	60.90	30.00	60,226.29	1,389.94
20/08/2025	55	662.51	637.20	60.23	30.00	59,563.78	1,389.94
20/09/2025	56	670.19	630.19	59.56	30.00	58,893.59	1,389.94
20/10/2025	57	698.16	602.89	58.89	30.00	58,195.43	1,389.94
20/11/2025	58	686.03	615.71	58.20	30.00	57,509.40	1,389.94
20/12/2025	59	713.71	588.72	57.51	30.00	56,795.69	1,389.94
20/01/2026	60	702.24	600.90	56.80	30.00	56,093.45	1,389.94
20/02/2026	61	710.38	593.47	56.09	30.00	55,383.07	1,389.94
20/03/2026	62	775.58	528.98	55.38	30.00	54,607.49	1,389.94
20/04/2026	63	727.58	577.75	54.61	30.00	53,879.91	1,389.94
20/05/2026	64	754.49	551.57	53.88	30.00	53,125.42	1,389.94
20/06/2026	65	744.74	562.07	53.13	30.00	52,380.68	1,389.94
20/07/2026	66	771.34	536.22	52.38	30.00	51,609.34	1,389.94
20/08/2026	67	762.30	546.03	51.61	30.00	50,847.04	1,389.94
20/09/2026	68	771.13	537.96	50.85	30.00	50,075.91	1,389.94
20/10/2026	69	797.23	512.63	50.08	30.00	49,278.68	1,389.94
20/11/2026	70	789.29	521.37	49.28	30.00	48,489.39	1,389.94
20/12/2026	71	815.06	496.39	48.49	30.00	47,674.33	1,389.94
20/01/2027	72	807.87	504.40	47.67	30.00	46,866.46	1,389.94
20/02/2027	73	817.22	495.85	46.87	30.00	46,049.24	1,389.94
20/03/2027	74	874.06	439.83	46.05	30.00	45,175.18	1,389.94
20/04/2027	75	836.81	477.95	45.18	30.00	44,338.37	1,389.94
20/05/2027	76	861.71	453.89	44.34	30.00	43,476.66	1,389.94
20/06/2027	77	856.48	459.98	43.48	30.00	42,620.18	1,389.94
20/07/2027	78	881.02	436.30	42.62	30.00	41,739.16	1,389.94
20/08/2027	79	876.60	441.60	41.74	30.00	40,862.56	1,389.94
20/09/2027	80	886.75	432.33	40.86	30.00	39,975.81	1,389.94
20/10/2027	81	910.73	409.23	39.98	30.00	39,065.08	1,389.94
20/11/2027	82	907.56	413.31	39.07	30.00	38,157.52	1,389.94
20/12/2027	83	931.16	390.62	38.16	30.00	37,226.36	1,389.94
20/01/2028	84	928.85	393.86	37.23	30.00	36,297.51	1,389.94
20/02/2028	85	939.61	384.03	36.30	30.00	35,357.90	1,389.94
20/03/2028	86	974.75	349.83	35.36	30.00	34,383.15	1,389.94
20/04/2028	87	961.79	363.77	34.38	30.00	33,421.36	1,389.94
20/05/2028	88	984.39	342.13	33.42	30.00	32,436.97	1,389.94
20/06/2028	89	984.32	343.18	32.44	30.00	31,452.65	1,389.94
20/07/2028	90	1,006.51	321.98	31.45	30.00	30,446.14	1,389.94

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total
20/08/2028	91	1,007.37	322.12	30.45	30.00	29,438.77	1,389.94
20/09/2028	92	1,019.04	311.46	29.44	30.00	28,419.73	1,389.94
20/10/2028	93	1,040.59	290.93	28.42	30.00	27,379.14	1,389.94
20/11/2028	94	1,042.89	289.67	27.38	30.00	26,336.25	1,389.94
20/12/2028	95	1,064.00	269.60	26.34	30.00	25,272.25	1,389.94
20/01/2029	96	1,067.29	267.38	25.27	30.00	24,204.96	1,389.94
20/02/2029	97	1,079.65	256.09	24.20	30.00	23,125.31	1,389.94
20/03/2029	98	1,115.93	220.88	23.13	30.00	22,009.38	1,389.94
20/04/2029	99	1,105.07	232.86	22.01	30.00	20,904.31	1,389.94
20/05/2029	100	1,125.04	214.00	20.90	30.00	19,779.27	1,389.94
20/06/2029	101	1,130.89	209.27	19.78	30.00	18,648.38	1,389.94
20/07/2029	102	1,150.39	190.90	18.65	30.00	17,497.99	1,389.94
20/08/2029	103	1,157.31	185.13	17.50	30.00	16,340.68	1,389.94
20/09/2029	104	1,170.72	172.88	16.34	30.00	15,169.96	1,389.94
20/10/2029	105	1,189.48	155.29	15.17	30.00	13,980.48	1,389.94
20/11/2029	106	1,198.05	147.91	13.98	30.00	12,782.43	1,389.94
20/12/2029	107	1,216.31	130.85	12.78	30.00	11,566.12	1,389.94
20/01/2030	108	1,226.00	122.37	11.57	30.00	10,340.12	1,389.94
20/02/2030	109	1,240.20	109.40	10.34	30.00	9,099.92	1,389.94
20/03/2030	110	1,263.92	86.92	9.10	30.00	7,836.00	1,389.94
20/04/2030	111	1,269.19	82.91	7.84	30.00	6,566.81	1,389.94
20/05/2030	112	1,286.15	67.22	6.57	30.00	5,280.66	1,389.94
20/06/2030	113	1,298.79	55.87	5.28	30.00	3,981.87	1,389.94
20/07/2030	114	1,315.20	40.76	3.98	30.00	2,666.67	1,389.94
20/08/2030	115	1,329.06	28.21	2.67	30.00	1,337.61	1,389.94
20/09/2030	116	1,337.61	14.15	1.34	30.00	0.00	1,383.10
		87,937.55	63,740.58	6,098.07	3,450.00		

Asimismo, el cliente podrá elegir la opción de reducir el número de cuotas, manteniendo el monto de la cuota a pagar:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total
05/02/2021		87,937.55				87,937.55	
20/02/2021	1	1,327.68	448.96	-	-	86,609.87	1,776.64
20/03/2021	2	832.79	827.24	86.61	30.00	85,777.08	1,776.64
20/04/2021	3	753.34	907.52	85.78	30.00	85,023.74	1,776.64
20/05/2021	4	791.23	870.39	85.02	30.00	84,232.51	1,776.64
20/06/2021	5	771.23	891.18	84.23	30.00	83,461.28	1,776.64
20/07/2021	6	808.79	854.39	83.46	30.00	82,652.49	1,776.64
20/08/2021	7	789.52	874.47	82.65	30.00	81,862.97	1,776.64
20/09/2021	8	798.67	866.11	81.86	30.00	81,064.30	1,776.64
20/10/2021	9	835.72	829.86	81.06	30.00	80,228.58	1,776.64
20/11/2021	10	817.59	848.82	80.23	30.00	79,410.99	1,776.64
20/12/2021	11	854.30	812.93	79.41	30.00	78,556.69	1,776.64
20/01/2022	12	836.95	831.13	78.56	30.00	77,719.74	1,776.64
20/02/2022	13	846.64	822.28	77.72	30.00	76,873.10	1,776.64
20/03/2022	14	935.53	734.24	76.87	30.00	75,937.57	1,776.64
20/04/2022	15	867.28	803.42	75.94	30.00	75,070.29	1,776.64
20/05/2022	16	903.08	768.49	75.07	30.00	74,167.21	1,776.64
20/06/2022	17	887.78	784.69	74.17	30.00	73,279.43	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multiriesgo	Saldo Cap.	Cuota Total
20/07/2022	18	923.20	750.16	73.28	30.00	72,356.23	1,776.64
20/08/2022	19	908.75	765.53	72.36	30.00	71,447.48	1,776.64
20/09/2022	20	919.27	755.92	71.45	30.00	70,528.21	1,776.64
20/10/2022	21	954.11	722.00	70.53	30.00	69,574.10	1,776.64
20/11/2022	22	940.97	736.10	69.57	30.00	68,633.13	1,776.64
20/12/2022	23	975.41	702.60	68.63	30.00	67,657.72	1,776.64
20/01/2023	24	963.16	715.82	67.66	30.00	66,694.56	1,776.64
20/02/2023	25	974.32	705.63	66.69	30.00	65,720.24	1,776.64
20/03/2023	26	1,053.21	627.71	65.72	30.00	64,667.03	1,776.64
20/04/2023	27	997.79	684.18	64.67	30.00	63,669.24	1,776.64
20/05/2023	28	1,031.19	651.78	63.67	30.00	62,638.05	1,776.64
20/06/2023	29	1,021.29	662.71	62.64	30.00	61,616.76	1,776.64
20/07/2023	30	1,054.25	630.77	61.62	30.00	60,562.51	1,776.64
20/08/2023	31	1,045.33	640.75	60.56	30.00	59,517.18	1,776.64
20/09/2023	32	1,057.43	629.69	59.52	30.00	58,459.75	1,776.64
20/10/2023	33	1,089.73	598.45	58.46	30.00	57,370.02	1,776.64
20/11/2023	34	1,082.29	606.98	57.37	30.00	56,287.73	1,776.64
20/12/2023	35	1,114.13	576.22	56.29	30.00	55,173.60	1,776.64
20/01/2024	36	1,107.73	583.74	55.17	30.00	54,065.87	1,776.64
20/02/2024	37	1,120.55	572.02	54.07	30.00	52,945.32	1,776.64
20/03/2024	38	1,169.84	523.85	52.95	30.00	51,775.48	1,776.64
20/04/2024	39	1,147.07	547.79	51.78	30.00	50,628.41	1,776.64
20/05/2024	40	1,177.73	518.28	50.63	30.00	49,450.68	1,776.64
20/06/2024	41	1,174.00	523.19	49.45	30.00	48,276.68	1,776.64
20/07/2024	42	1,204.15	494.21	48.28	30.00	47,072.53	1,776.64
20/08/2024	43	1,201.54	498.03	47.07	30.00	45,870.99	1,776.64
20/09/2024	44	1,215.45	485.32	45.87	30.00	44,655.54	1,776.64
20/10/2024	45	1,244.84	457.14	44.66	30.00	43,410.70	1,776.64
20/11/2024	46	1,243.94	459.29	43.41	30.00	42,166.76	1,776.64
20/12/2024	47	1,272.81	431.66	42.17	30.00	40,893.95	1,776.64
20/01/2025	48	1,273.09	432.66	40.89	30.00	39,620.86	1,776.64
20/02/2025	49	1,287.83	419.19	39.62	30.00	38,333.03	1,776.64
20/03/2025	50	1,342.18	366.13	38.33	30.00	36,990.85	1,776.64
20/04/2025	51	1,318.29	391.36	36.99	30.00	35,672.56	1,776.64
20/05/2025	52	1,345.79	365.18	35.67	30.00	34,326.77	1,776.64
20/06/2025	53	1,349.13	363.18	34.33	30.00	32,977.64	1,776.64
20/07/2025	54	1,376.07	337.59	32.98	30.00	31,601.57	1,776.64
20/08/2025	55	1,380.69	334.35	31.60	30.00	30,220.88	1,776.64
20/09/2025	56	1,396.68	319.74	30.22	30.00	28,824.20	1,776.64
20/10/2025	57	1,422.75	295.07	28.82	30.00	27,401.45	1,776.64
20/11/2025	58	1,429.33	289.91	27.40	30.00	25,972.12	1,776.64
20/12/2025	59	1,454.79	265.88	25.97	30.00	24,517.33	1,776.64
20/01/2026	60	1,462.73	259.39	24.52	30.00	23,054.60	1,776.64
20/02/2026	61	1,479.67	243.92	23.05	30.00	21,574.93	1,776.64
20/03/2026	62	1,519.00	206.07	21.57	30.00	20,055.93	1,776.64
20/04/2026	63	1,514.39	212.19	20.06	30.00	18,541.54	1,776.64
20/05/2026	64	1,538.29	189.81	18.54	30.00	17,003.25	1,776.64
20/06/2026	65	1,549.75	179.89	17.00	30.00	15,453.50	1,776.64
20/07/2026	66	1,572.99	158.20	15.45	30.00	13,880.51	1,776.64
20/08/2026	67	1,585.90	146.86	13.88	30.00	12,294.61	1,776.64
20/09/2026	68	1,604.27	130.08	12.29	30.00	10,690.34	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total
20/10/2026	69	1,626.51	109.44	10.69	30.00	9,063.83	1,776.64
20/11/2026	70	1,641.68	95.90	9.06	30.00	7,422.15	1,776.64
20/12/2026	71	1,663.24	75.98	7.42	30.00	5,758.91	1,776.64
20/01/2027	72	1,679.95	60.93	5.76	30.00	4,078.96	1,776.64
20/02/2027	73	1,699.40	43.16	4.08	30.00	2,379.56	1,776.64
20/03/2027	74	2,379.56	22.73	2.38	30.00	0.00	2,434.67
		87,937.55	38,348.43	3,653.41	2,190.00		

Para ambos no se considera el cobro del seguro de desgravamen en la primera Cuota, ya que el pago se realizó en el momento del pago anticipado.

i) APLICACIÓN DEL PAGO ANTICIPADO TOTAL

Continuamos con el mismo ejemplo del desembolso de S/ 114,000, pactado a 120 cuotas mensuales; sin embargo, el cliente desea realizar un pago anticipado total a la fecha 04 de febrero de 2021:

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Estado	Flujo
20/09/2020		114,000.00				114,000.00			- 114,000.00
20/10/2020	1	465.62	1,167.02	114.00	30.00	113,534.38	1,776.64	PAGADO	1,776.64
20/11/2020	2	431.91	1,201.20	113.53	30.00	113,102.47	1,776.64	PAGADO	1,776.64
20/12/2020	3	475.71	1,157.83	113.10	30.00	112,626.76	1,776.64	PAGADO	1,776.64
20/01/2021	4	442.42	1,191.59	112.63	30.00	112,184.34	1,776.64	PAGADO	1,776.64
20/02/2021	5	447.55	1,186.91	112.18	30.00	111,736.79	1,776.64	PENDIENTE	1,776.64
20/03/2021	6	567.67	1,067.23	111.74	30.00	111,169.12	1,776.64	PENDIENTE	1,776.64
20/04/2021	7	459.30	1,176.17	111.17	30.00	110,709.82	1,776.64	PENDIENTE	1,776.64
20/05/2021	8	502.59	1,133.34	110.71	30.00	110,207.23	1,776.64	PENDIENTE	1,776.64
20/06/2021	9	470.43	1,166.00	110.21	30.00	109,736.80	1,776.64	PENDIENTE	1,776.64
20/07/2021	10	513.52	1,123.38	109.74	30.00	109,223.28	1,776.64	PENDIENTE	1,776.64
20/08/2021	11	481.83	1,155.59	109.22	30.00	108,741.45	1,776.64	PENDIENTE	1,776.64
20/09/2021	12	487.41	1,150.49	108.74	30.00	108,254.05	1,776.64	PENDIENTE	1,776.64
20/10/2021	13	530.19	1,108.20	108.25	30.00	107,723.86	1,776.64	PENDIENTE	1,776.64
20/11/2021	14	499.20	1,139.72	107.72	30.00	107,224.66	1,776.64	PENDIENTE	1,776.64
20/12/2021	15	541.76	1,097.66	107.22	30.00	106,682.90	1,776.64	PENDIENTE	1,776.64
20/01/2022	16	511.25	1,128.71	106.68	30.00	106,171.65	1,776.64	PENDIENTE	1,776.64
20/02/2022	17	517.17	1,123.30	106.17	30.00	105,654.48	1,776.64	PENDIENTE	1,776.64
20/03/2022	18	631.85	1,009.14	105.65	30.00	105,022.63	1,776.64	PENDIENTE	1,776.64
20/04/2022	19	530.48	1,111.14	105.02	30.00	104,492.15	1,776.64	PENDIENTE	1,776.64
20/05/2022	20	572.46	1,069.69	104.49	30.00	103,919.69	1,776.64	PENDIENTE	1,776.64
20/06/2022	21	543.25	1,099.47	103.92	30.00	103,376.44	1,776.64	PENDIENTE	1,776.64
20/07/2022	22	585.00	1,058.26	103.38	30.00	102,791.44	1,776.64	PENDIENTE	1,776.64
20/08/2022	23	556.31	1,087.54	102.79	30.00	102,235.13	1,776.64	PENDIENTE	1,776.64
20/09/2022	24	562.75	1,081.65	102.24	30.00	101,672.38	1,776.64	PENDIENTE	1,776.64
20/10/2022	25	604.15	1,040.82	101.67	30.00	101,068.23	1,776.64	PENDIENTE	1,776.64
20/11/2022	26	576.26	1,069.31	101.07	30.00	100,491.97	1,776.64	PENDIENTE	1,776.64
20/12/2022	27	617.41	1,028.74	100.49	30.00	99,874.56	1,776.64	PENDIENTE	1,776.64
20/01/2023	28	590.09	1,056.68	99.87	30.00	99,284.47	1,776.64	PENDIENTE	1,776.64
20/02/2023	29	596.93	1,050.43	99.28	30.00	98,687.54	1,776.64	PENDIENTE	1,776.64
20/03/2023	30	705.36	942.59	98.69	30.00	97,982.18	1,776.64	PENDIENTE	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Estado	Flujo
20/04/2023	31	612.01	1,036.65	97.98	30.00	97,370.17	1,776.64	PENDIENTE	1,776.64
20/05/2023	32	652.49	996.78	97.37	30.00	96,717.68	1,776.64	PENDIENTE	1,776.64
20/06/2023	33	626.64	1,023.28	96.72	30.00	96,091.04	1,776.64	PENDIENTE	1,776.64
20/07/2023	34	666.87	983.68	96.09	30.00	95,424.17	1,776.64	PENDIENTE	1,776.64
20/08/2023	35	641.63	1,009.59	95.42	30.00	94,782.54	1,776.64	PENDIENTE	1,776.64
20/09/2023	36	649.06	1,002.80	94.78	30.00	94,133.48	1,776.64	PENDIENTE	1,776.64
20/10/2023	37	688.87	963.64	94.13	30.00	93,444.61	1,776.64	PENDIENTE	1,776.64
20/11/2023	38	664.55	988.65	93.44	30.00	92,780.06	1,776.64	PENDIENTE	1,776.64
20/12/2023	39	704.07	949.79	92.78	30.00	92,075.99	1,776.64	PENDIENTE	1,776.64
20/01/2024	40	680.39	974.17	92.08	30.00	91,395.60	1,776.64	PENDIENTE	1,776.64
20/02/2024	41	688.27	966.97	91.40	30.00	90,707.33	1,776.64	PENDIENTE	1,776.64
20/03/2024	42	758.46	897.47	90.71	30.00	89,948.87	1,776.64	PENDIENTE	1,776.64
20/04/2024	43	705.03	951.66	89.95	30.00	89,243.84	1,776.64	PENDIENTE	1,776.64
20/05/2024	44	743.81	913.59	89.24	30.00	88,500.03	1,776.64	PENDIENTE	1,776.64
20/06/2024	45	721.81	936.33	88.50	30.00	87,778.22	1,776.64	PENDIENTE	1,776.64
20/07/2024	46	760.27	898.59	87.78	30.00	87,017.95	1,776.64	PENDIENTE	1,776.64
20/08/2024	47	738.97	920.65	87.02	30.00	86,278.98	1,776.64	PENDIENTE	1,776.64
20/09/2024	48	747.53	912.83	86.28	30.00	85,531.45	1,776.64	PENDIENTE	1,776.64
20/10/2024	49	785.52	875.59	85.53	30.00	84,745.93	1,776.64	PENDIENTE	1,776.64
20/11/2024	50	765.28	896.61	84.75	30.00	83,980.65	1,776.64	PENDIENTE	1,776.64
20/12/2024	51	802.95	859.71	83.98	30.00	83,177.70	1,776.64	PENDIENTE	1,776.64
20/01/2025	52	783.44	880.02	83.18	30.00	82,394.26	1,776.64	PENDIENTE	1,776.64
20/02/2025	53	792.52	871.73	82.39	30.00	81,601.74	1,776.64	PENDIENTE	1,776.64
20/03/2025	54	885.64	779.40	81.60	30.00	80,716.10	1,776.64	PENDIENTE	1,776.64
20/04/2025	55	811.94	853.98	80.72	30.00	79,904.16	1,776.64	PENDIENTE	1,776.64
20/05/2025	56	848.76	817.98	79.90	30.00	79,055.40	1,776.64	PENDIENTE	1,776.64
20/06/2025	57	831.17	836.41	79.06	30.00	78,224.23	1,776.64	PENDIENTE	1,776.64
20/07/2025	58	867.64	800.78	78.22	30.00	77,356.59	1,776.64	PENDIENTE	1,776.64
20/08/2025	59	850.84	818.44	77.36	30.00	76,505.75	1,776.64	PENDIENTE	1,776.64
20/09/2025	60	860.70	809.43	76.51	30.00	75,645.05	1,776.64	PENDIENTE	1,776.64
20/10/2025	61	896.61	774.38	75.65	30.00	74,748.44	1,776.64	PENDIENTE	1,776.64
20/11/2025	62	881.05	790.84	74.75	30.00	73,867.39	1,776.64	PENDIENTE	1,776.64
20/12/2025	63	916.59	756.18	73.87	30.00	72,950.80	1,776.64	PENDIENTE	1,776.64
20/01/2026	64	901.87	771.82	72.95	30.00	72,048.93	1,776.64	PENDIENTE	1,776.64
20/02/2026	65	912.31	762.28	72.05	30.00	71,136.62	1,776.64	PENDIENTE	1,776.64
20/03/2026	66	996.05	679.45	71.14	30.00	70,140.57	1,776.64	PENDIENTE	1,776.64
20/04/2026	67	934.41	742.09	70.14	30.00	69,206.16	1,776.64	PENDIENTE	1,776.64
20/05/2026	68	968.97	708.46	69.21	30.00	68,237.19	1,776.64	PENDIENTE	1,776.64
20/06/2026	69	956.45	721.95	68.24	30.00	67,280.74	1,776.64	PENDIENTE	1,776.64
20/07/2026	70	990.61	688.75	67.28	30.00	66,290.13	1,776.64	PENDIENTE	1,776.64
20/08/2026	71	979.00	701.35	66.29	30.00	65,311.13	1,776.64	PENDIENTE	1,776.64
20/09/2026	72	990.34	690.99	65.31	30.00	64,320.79	1,776.64	PENDIENTE	1,776.64
20/10/2026	73	1,023.87	658.45	64.32	30.00	63,296.92	1,776.64	PENDIENTE	1,776.64
20/11/2026	74	1,013.66	669.68	63.30	30.00	62,283.26	1,776.64	PENDIENTE	1,776.64
20/12/2026	75	1,046.77	637.59	62.28	30.00	61,236.49	1,776.64	PENDIENTE	1,776.64
20/01/2027	76	1,037.52	647.88	61.24	30.00	60,198.97	1,776.64	PENDIENTE	1,776.64
20/02/2027	77	1,049.53	636.91	60.20	30.00	59,149.44	1,776.64	PENDIENTE	1,776.64
20/03/2027	78	1,122.54	564.95	59.15	30.00	58,026.90	1,776.64	PENDIENTE	1,776.64
20/04/2027	79	1,074.68	613.93	58.03	30.00	56,952.22	1,776.64	PENDIENTE	1,776.64
20/05/2027	80	1,106.67	583.02	56.95	30.00	55,845.55	1,776.64	PENDIENTE	1,776.64
20/06/2027	81	1,099.94	590.85	55.85	30.00	54,745.61	1,776.64	PENDIENTE	1,776.64

Fechas	N° cuotas	Amort. Cap.	Intereses	Seg. Desg	Seguro Multirriesgo	Saldo Cap.	Cuota Total	Estado	Flujo
20/07/2027	82	1,131.46	560.43	54.75	30.00	53,614.15	1,776.64	PENDIENTE	1,776.64
20/08/2027	83	1,125.79	567.24	53.61	30.00	52,488.36	1,776.64	PENDIENTE	1,776.64
20/09/2027	84	1,138.82	555.33	52.49	30.00	51,349.54	1,776.64	PENDIENTE	1,776.64
20/10/2027	85	1,169.62	525.67	51.35	30.00	50,179.92	1,776.64	PENDIENTE	1,776.64
20/11/2027	86	1,165.55	530.91	50.18	30.00	49,014.37	1,776.64	PENDIENTE	1,776.64
20/12/2027	87	1,195.87	501.76	49.01	30.00	47,818.50	1,776.64	PENDIENTE	1,776.64
20/01/2028	88	1,192.90	505.92	47.82	30.00	46,625.60	1,776.64	PENDIENTE	1,776.64
20/02/2028	89	1,206.71	493.30	46.63	30.00	45,418.89	1,776.64	PENDIENTE	1,776.64
20/03/2028	90	1,251.84	449.38	45.42	30.00	44,167.05	1,776.64	PENDIENTE	1,776.64
20/04/2028	91	1,235.18	467.29	44.17	30.00	42,931.87	1,776.64	PENDIENTE	1,776.64
20/05/2028	92	1,264.22	439.49	42.93	30.00	41,667.65	1,776.64	PENDIENTE	1,776.64
20/06/2028	93	1,264.12	440.85	41.67	30.00	40,403.53	1,776.64	PENDIENTE	1,776.64
20/07/2028	94	1,292.63	413.61	40.40	30.00	39,110.90	1,776.64	PENDIENTE	1,776.64
20/08/2028	95	1,293.74	413.79	39.11	30.00	37,817.16	1,776.64	PENDIENTE	1,776.64
20/09/2028	96	1,308.71	400.11	37.82	30.00	36,508.45	1,776.64	PENDIENTE	1,776.64
20/10/2028	97	1,336.39	373.74	36.51	30.00	35,172.06	1,776.64	PENDIENTE	1,776.64
20/11/2028	98	1,339.35	372.12	35.17	30.00	33,832.71	1,776.64	PENDIENTE	1,776.64
20/12/2028	99	1,366.46	346.35	33.83	30.00	32,466.25	1,776.64	PENDIENTE	1,776.64
20/01/2029	100	1,370.68	343.49	32.47	30.00	31,095.57	1,776.64	PENDIENTE	1,776.64
20/02/2029	101	1,386.55	328.99	31.10	30.00	29,709.02	1,776.64	PENDIENTE	1,776.64
20/03/2029	102	1,433.17	283.76	29.71	30.00	28,275.85	1,776.64	PENDIENTE	1,776.64
20/04/2029	103	1,419.20	299.16	28.28	30.00	26,856.65	1,776.64	PENDIENTE	1,776.64
20/05/2029	104	1,444.85	274.93	26.86	30.00	25,411.80	1,776.64	PENDIENTE	1,776.64
20/06/2029	105	1,452.37	268.86	25.41	30.00	23,959.43	1,776.64	PENDIENTE	1,776.64
20/07/2029	106	1,477.41	245.27	23.96	30.00	22,482.02	1,776.64	PENDIENTE	1,776.64
20/08/2029	107	1,486.30	237.86	22.48	30.00	20,995.72	1,776.64	PENDIENTE	1,776.64
20/09/2029	108	1,503.50	222.14	21.00	30.00	19,492.22	1,776.64	PENDIENTE	1,776.64
20/10/2029	109	1,527.61	199.54	19.49	30.00	17,964.61	1,776.64	PENDIENTE	1,776.64
20/11/2029	110	1,538.61	190.07	17.96	30.00	16,426.00	1,776.64	PENDIENTE	1,776.64
20/12/2029	111	1,562.06	168.15	16.43	30.00	14,863.94	1,776.64	PENDIENTE	1,776.64
20/01/2030	112	1,574.52	157.26	14.86	30.00	13,289.42	1,776.64	PENDIENTE	1,776.64
20/02/2030	113	1,592.75	140.60	13.29	30.00	11,696.67	1,776.64	PENDIENTE	1,776.64
20/03/2030	114	1,623.22	111.72	11.70	30.00	10,073.45	1,776.64	PENDIENTE	1,776.64
20/04/2030	115	1,629.99	106.58	10.07	30.00	8,443.46	1,776.64	PENDIENTE	1,776.64
20/05/2030	116	1,651.76	86.44	8.44	30.00	6,791.70	1,776.64	PENDIENTE	1,776.64
20/06/2030	117	1,667.99	71.86	6.79	30.00	5,123.71	1,776.64	PENDIENTE	1,776.64
20/07/2030	118	1,689.07	52.45	5.12	30.00	3,434.64	1,776.64	PENDIENTE	1,776.64
20/08/2030	119	1,706.87	36.34	3.43	30.00	1,727.77	1,776.64	PENDIENTE	1,776.64
20/09/2030	120	1,726.63	18.28	1.73	30.00	0.00	1,777.76	PENDIENTE	1,777.76
		114,000.00	87,199.83	8,398.09	3,600.00				
								TCEA	15.04%
								TCEM	1.17%

- i) Cálculo de interés compensatorio por los 16 días transcurridos:
- $$IC = SK * (1 + TEA)^{ADT/360} - 1)$$
- $$IC = 112,184.34 * (1 + 0.13)^{16/360} - 1)$$
- $$IC = S/ 611.03$$

Siendo la siguiente liquidación de la cancelación del préstamo:

Saldo de Capital	S/ 112,184.34
Intereses por 16 días de interés	S/ 611.03
Seguro de Desgravamen	S/ 59.83
Seguro Multiriesgo	<u>S/ 30.00</u>
TOTAL A PAGAR	S/ 112,885.20
Operación afecta a ITF (0.005%)	

Liquidación mediante la cancelación del préstamo, por el total de S/ 112,885.20

Los valores utilizados en los ejemplos son referenciales de acuerdo al tarifario vigente que corresponde al producto, para mayor detalle de tasas, comisiones y gastos puedes consultar con nuestros asesores de negocio que atienden en nuestra red de agencias u oficinas, así como en los tarifarios disponibles en agencias y en nuestra página web institucional – www.cajamaynas.pe

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