POLICY PAPER DRAFT VERSION

EVALUATING THE IMPACT OF COMMUNICATING THE CREDIT CARD STATEMENT ON FINANCIAL DECISIONS: EXPERIMENTAL EVIDENCE

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Abstract

Chilean regulation establishes the format and content that financial providers must communicate to cardholders about their transactions throughout a monthly billing statement. Although this information is relevant for making decisions, comparative evidence indicates that people have difficulty understanding and making informed decisions.

This policy paper is an executive summary of a study that shows qualitative and quantitative evidence about the impact of Credit Cards Statements on consumers' repaying decisions. The study considers the current credit card statement and provides redesign options based on a review of the literature in the areas of economics and behavioral science. Four alternative prototypes to the current account statement were designed, considering (i) the simplification and restructuring of the account statement information, (ii) the incorporation of warnings about the consequences of making different payment amounts that generate interests, (iii) and greater relevance to the total amount invoiced over the minimum payment.

Through a random online experiment with 1,328 cardholders, the study tested the impact of the four prototypes and the current statement on comprehension, shopping around credit cards and willingness to pay. The results indicate that the prototypes increase the general understanding of the credit card billing statement: 35% of people consider that the current statement is generally understood, while with the new designs this value increases, on average, to 53%. Furthermore, the four treatments improve the clarity of each section of the statement. In addition, the redesigned billing statements increase the number of people who are willing to quote another card to 40% (vs. 29% of the current statement). Regarding the consequences of payments, 50% of the people answered correctly that by paying the total amount invoiced they avoid paying additional or revolving interest (vs. 26% in the case of the current statement), while 55% manages to identify the minimum payment as the lowest possible payment to avoid default interest and possible collection costs (vs. 49% in the case of the current statement). Finally, regarding the willingness to pay, the statement that contains messages about the consequences of paying less than the total and the minimum, accompanied by warning symbols, and giving greater visual prevalence to the total amount invoiced in relation to the minimum payment, managed to increase by 12 percentage points the probability of the willingness to pay the total invoiced with respect to the current statement. Based on these findings, the Report formulates proposals for regulatory improvement.

This policy paper summarises the main findings of a more extended Report. The report is only available in Spanish, and it can be requested to the Behavioural Economics Unit of SERNAC.









Policy Paper

1. Introduction

Credit cards are one of the main means of obtaining direct loans. Every month, credit cardholders receive a billing statement with relevant credit card information. However, the literature indicates that this type of financial information is difficult to process (Soll, Keeney & Larrick, 2013).

This work aims to answer whether behavioural science tools can help improve credit card statements. In particular, the objective is to establish guidelines to redesign the current credit card statement which is established in the regulation¹, so that consumers can better understand their credit card statements and make better payment decisions. From a methodological perspective, to establish these guidelines, this work used a randomized experiment, which have been indicated as the gold standard for evaluating interventions, being widely used in different organizations (DellaVigna & Linos, 2020).

From a public policy perspective, improving credit card financial information can lower unwanted debt levels. In this regard, in Chile, people have a financial burden of around 20% and default levels close to 10% for non-bank providers (Comisión para el Mercado Financiero, 2019), and they have been increasing due to the current national context (Retail Financiero, 2020).

2. Problem description

Currently, around 17 and a half million bank and non-bank credit cards are estimated in Chile, of which around 7 and a half million were in operation in July 2020 (Comisión para el Mercado Financiero, 2020). The current credit card billing statement contains information about the total balance to be paid, payment due date, the minimum required payment, late payment fees, following balances to be paid, and details of purchases and interest fees (Figure 1). Similar account statements have been examined in other countries, finding that there is difficulty in understanding their concepts (Giné et al., 2019). Consistently, and within the

¹ Its format, content and other characteristics are established for any type of Credit Card in the Regulation on Consumer Information on Bank and Non-Bank Credit Cards (art.3 No. 7).









context of the present work, a qualitative stage was carried out. It indicated that people have difficulty in identifying the consequences of not paying the total balance or the minimum required payment. In addition, the evidence indicates that providing simple comparative information allows people to evaluate interest rates better and estimate the relative cost of credit cards (Chin & Bruine de Bruin, 2019).

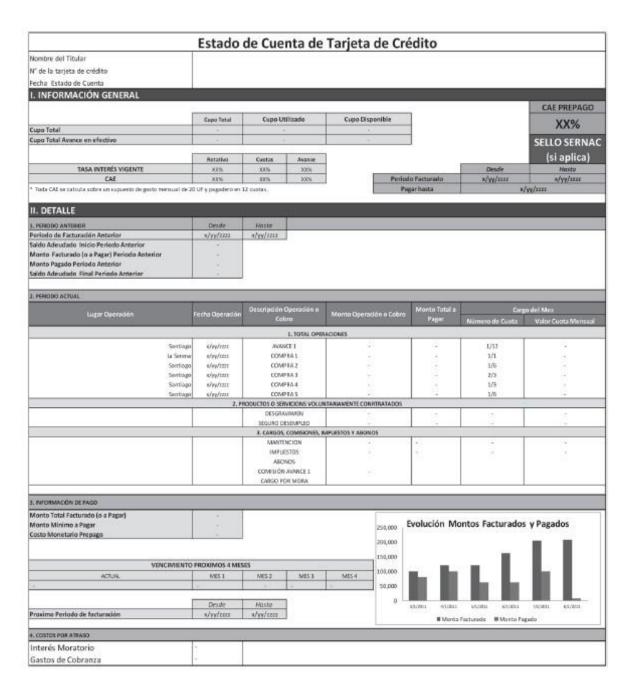


Figure 1: Current credit card billing statement established by regulation









The complexity of credit card statements affects not only its understanding but also individuals' payment behaviour. In this regard, the evidence indicates that how payment amounts are presented in statements affects consumer payment decisions (Navarro-Martinez et al., 2011; Stewart, 2009; Lunn, McGowan & Howard, 2018). This evidence indicates that warning about the future consequences of paying the minimum causes the minimum amount to be used as a reference point, and that it can lead to reducing the amounts paid, increasing debt levels.

3. Summary of literature review

The behavioural science literature proposes different tools (or *nudges*) to motivate behavioural changes (Thaler & Sunstein, 2008; Sunstein, 2014a). Within the most relevant nudges in the literature (Sunstein, 2014b), three tools, or areas of action, were selected to propose modifications to the credit card statement: (1) simplification of the statement, including explanations and rearranging its content, (2) incorporation of warnings of the consequences of paying less than the total balance and the minimum required payment, and (3) visual emphasis of the total balance information, in detriment of the minimum required payment.

The literature indicates that simplifying messages positively affects people's payment behaviour (John & Blume, 2018), as well as improving organization and clarity allows more users to identify the main components of credit card statements (Giné et al., 2019). Regarding warnings, the literature indicates that adding graphic or text warnings helps people to avoid risks and over-optimistic behaviours (Sunstein, 2014b). Since there is a large body of evidence showing that people's attention is limited (e.g., DellaVigna, 2009), the warnings help focus attention on the most important elements when making a payment decision. Finally, the literature indicates that people use numerical values, such as the minimum amount to be paid, as references (Bartels & Sussman, 2017) or "anchors" (Tversky & Kahneman, 1974), which influence payment decisions (e.g., Salisbury, 2014). In this sense, adding warnings about the consequences of paying less than the total balance has shown positive effects on payment behaviour since it avoids those consequences and the increase in payments (Schwartz, 2020).









4. Methodology

Based on the literature review, it was proposed to focus on the changes to the credit card statement on the areas previously described: simplification, warnings, and information about the minimum payment. The study considered the realization of an online-randomized experiment that compared the current credit card statement (control group) with four variants (treatments).

One thousand three hundred twenty-eight valid responses were registered through a stratified sampling procedure, ensuring a minimum sample size for different demographic variables. In particular, study participants were randomly assigned to review one of five different credit card statements. The five statements, or experimental conditions, were:

· Control:

- o "Current" credit card statement.
- Treatments (simplified statements that also included a summary table of amounts to be paid):
 - o "Symbols with minimum": Warnings using symbols for different payment amounts.
 - o "Symbols without minimum": Warnings with the same format as above and the summary table does not include the minimum required payment.
 - o "Table with minimum": Warnings using a table format, indicating the consequences of paying different amounts.
 - o "Table without minimum": Warnings with the same format as above and the summary table does not include the minimum required payment.

In addition, a new organization of the information was introduced in all treatment statements; detailing in a single table the different costs that comprise the total payment amount, including a comparison of the equivalent annual cost (*Carga Anual Equivalente*, CAE) with the market, and adding explanations of each section and a glossary of terms.

After viewing the assigned credit card statement, each participant entered their willingness to pay as if it were a statement she or he had just received, as presented in most of the literature (e.g., Hershfield & Roese, 2015). Then, to measure whether they understood the information, each participant answered questions about what amounts they must pay if









they wanted to avoid paying additional or revolving fees, late payment, and possible collection fees. The study also included several questions about the clarity and assessment of the statements, overall and for each section, and if the participant wanted to get another credit card. Finally, a series of questions were asked about experience with credit card payments, financial literacy, attitudes towards debt, and demographic questions.

5. Results

General understanding. Of those participants who were assigned to the current credit card statement, only 35% agreed that the current statement is easy to understand. In comparison, 45% did not agree with this (the rest were indifferent). In contrast, more than half of the people assigned to any of the redesigned statements (53%) reported agreeing that the statement is easy to understand, while only 29% reported otherwise.

Clarity in sections. People who viewed the redesigned statements reported a greater understanding in virtually all sections, compared to the current statement. For example, 55% reported agreeing that the information on late payment fees is understandable, being one of the most challenging sections to communicate since, in the current credit card statement, only 25% agreed that this information is understandable. People also showed greater understanding in sections that provide information on interest rates (54% vs. 38% with the current credit card statement), on how to make the payment (65% vs. 43% with the current), and information regarding payment dues in the next months (77% vs. 58% with the current).

Willingness to get a different credit card. The redesigned statements contained information that allows a comparison between the CAE² of the credit card with the market CAE. This information increased the number of people who report being willing to get another card to 40% (vs. 29% with the current statement).

Consequences of payments lower than the total and the minimum. Only 26% of the people who saw the current credit card statement correctly answered that paying the total balance avoids

² CAE is similar to the annual percentage rate. It is defined by Regulation as an indicator (expressed as a percentage) and allows consumers to compare, determine and verify the suitability of making a specific transaction with the credit card.









paying additional or revolving fees. This percentage increases to 50%, on average, for those who received the redesigned statements – the difference is even greater for those who used the statements with symbols (55%). When evaluating whether participants could identify the minimum amount as the lowest possible payment to avoid default fees and possible collection fees, 49% of participants who saw the current statement answered correctly. In contrast, of those participants who saw the redesigned statements, 55% answered this question correctly. This percentage increases for those who saw the summary table of amounts to be paid including the minimum amount (61%).

Willingness to pay. The redesigned credit card statements decreased people's likelihood of being willing to pay less than the total balance but more than the minimum (reduction between 9 and 13 percentage points vs. current statement). This reduction increases the probability of being willing to pay the total balance, directionally, on all redesigned statements, but only statistically in the case of the "Symbols without minimum" statement (Figure 2). For this specific treatment, the probability of being willing to pay the total balance increases by 12 percentage points compared to the current statement, and the ratio of the amount paid to the total balance increases by 7 percentage points. For the rest of the redesigned statements, the reduction in the revolving amount went to paying the minimum required payment, a phenomenon consistent with previous literature when the minimum amount is highlighted. The result of the statement "Symbols without minimum" is more pronounced for younger people and women.









SIN SELLO **SERNAC**

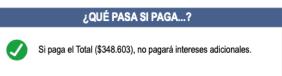
Nombre del titular Nº de tarjeta de crédito Fecha estado de cuenta Periodo facturación

XXXXXX XXXXXXXXXX XXXXXXXXX XXXXXXXX 7246 9482 1452 XXXX 25/09/2020 26 de Agosto de 2020 al 25 de Septiembre de 2020

TOTAL	PAGAR	
A PAGAR	HASTA	
\$348.603	10 - OCT - 2020	

El Pago Mínimo es de \$47.238. Pagar el mímo NO exime del pago de intereses.

DETALLE TOTAL A PAG (Montos del periodo 26-Ago a 25-S		
Monto pendiente de pago del periodo anterior	+	\$191.648
Cobros por intereses adicionales (rotativos) ¹	+	\$3.968
Cobros por atraso 1	+	\$803
Cobros por comisiones 1	+	\$672
Compras en cuotas	+	\$104.003
Total Pago Automático con Tarjeta (PAT)	+	\$46.801
Productos o servicios contratados	+	\$0
Traspaso deuda internacional	+	\$0
Impuestos	+	\$708
Abonos	-	\$0
TOTAL	=	\$348.603
¹ En los últimos 12 meses el total de estos cobro	s ascienc	le a \$19.690





Si paga entre el Total a Pagar y el Pago Mínimo (\$47.238), pagará intereses adicionales. A menor monto de pago, pagará más intereses y su deuda tardará más tiempo en ser pagada.



Si paga menos que el Pago Mínimo, pagará intereses adicionales, intereses de mora y podría pagar gastos de cobranza. Además, su deuda tardará más tiempo en ser pagada.

¿CUÁLES SON LOS COSTOS POR ATRASO O POR PAGAR MENOS DEL TOTAL/MÍNIMO?			
Interés Adicional	Interés de Mora	Gastos de Cobranza	
Cobro adicional (o rotativo) al pagar menos que el total. Esta tasa de interés se aplica sobre el monto que no se pagó que esté sobre el mínimo.	Cobro adicional al no pagar o pagar menos que el mínimo. Esta tasa de interés se aplica sobre el monto que no se pagó.	Cobro adicional después del día 20 de atraso. Se aplica por una sola vez sobre el monto pendiente de pago.	
21,48% (tasa de interés en base anual)	26,88% (tasa de interés en base anual)	1%	



La CAE de su tarjeta refleja el costo del crédito al comprar en cuotas. La CAE promedio de mercado refleja el costo promedio de otras tarjetas al comprar en cuotas. Una CAE más alta implica un mayor costo para usted

INFORMACIÓN GENERAL DE CUPO				
TOTAL UTILIZADO DISPONIBLE				
Cupo tarjeta	\$3.000.000	\$1.740.061	\$1.259.939	
Cupo avance en efectivo	\$3.000.000	\$0	\$3.000.000	
Para terminar con el total de su deuda anticipadamente deberá pagar:			\$1.740.061	

INFORMACI	ÓN GENERAL D	DE VENCIMIEN róximos 4 meses)	TO CUOTAS
NOVIEMBRE	DICIEMBRE	ENERO	FEBRERO
\$74.925	\$61.246	\$38.039	\$38.039
Cuotas que de adicionales	berá pagar en los p	oróximos meses s	i no hay compras

¿CÓMO PAGAR?



Sucursales



Sitio Web









			DETALLE P	ERIODO ACTUAL				
							Cargo d	el mes
Lugar de operación	Fecha operación	Código referencia	Descripción operación	o cobro	Monto Operación o cobro	Monto Total a pagar	Nº cuota	Valor cuota mensual
			1.TOTAL OPERACIONES					\$120.804
	26-08-20	0509 00463140	Monto cancelado		\$-30.000	\$-30.000	01/01	\$-30.000
			TOTAL PAGOS A LA CUENTA					\$-30.000
Santiago	26-08-20	0509 00626502	Zenit Seguros Gen R00 Santiago		\$40.000	\$40.000	01/01	\$40.000
Santiago	26-08-20	1609 02153519	ADT SA. R00 Santiago		\$6.801	\$6.801	01/01	\$6.801
			TOTAL PAT A LA CUENTA					\$46.801
Santiago	26-08-20	1409 88830212	Abastible Express E	TASA INT. 2,46%	\$9.900	\$10.392	03/03	\$3.464
Santiago	27-08-20	1409 88424843	Copec	TASA INT 0,00%	\$42.156	\$42.156	05/06	\$7.026
Santiago	31-08-20	1409 88544048	Silvy George	TASA INT. 0,00%	\$16.500	\$16.500	04/05	\$3.300
Santiago	31-08-20	1409 88510252	Silvy George	TASA INT.0,00%	\$29.036	\$29.036	04/04	\$7.259
Santiago	01-09-20	1409 88908684	Senor De Maica	TASA INT. 0,00%	\$13.412	\$13.412	03/04	\$3.353
Santiago	01-09-20	1409 88931831	Senor De Maica	TASA INT 0,00%	\$24.364	\$24.364	01/02	\$12.182
Santiago	01-09-20	1409 88935005	Abastible Express E	TASA INT. 2,49%	\$11.900	\$12.346	01/02	\$6.173
Santiago	01-09-20	1409 88936627	Detalle Compra Tecn	TASA INT. 1,67%	\$1.000.000	\$1.369.404	01/36	\$38.039
Santiago	02-09-20	1409 88939458	Copec	TASA INT. 0,00%	\$69.621	\$69.621	01/03	\$23.207
lacaca and a T anan			TOTAL COMPRAS EN CUOTAS	A LA CUENTA				\$104.003
			2.PRODUCTOS O SERVICIOS V MOVIMIENTOS	OLUNTARIAMENT	E CONTRATADOS S	N		\$0
			3.CARGOS, COMISIONES, IMPL	JESTOS Y ABONO	s			\$6.151
	10-09-20	1209 00000000	Impuesto Decreto Ley 3475 Tasa	0,198%	\$55	\$55	01/01	\$55
	20-09-20	1609 00000000	Mantención Operación Mensual		\$672	\$672	01/01	\$672
	20-09-20	2009 00000000	Impuesto Decreto Ley 3475 Tasa	0,066%	\$653	\$653	01/01	\$653
	20-09-20	2709 00000000	Intereses Rotativos	of management	\$3.968	\$3.968	01/01	\$3.968
	20-09-20	2709 00000000	Intereses De Mora		\$803	\$803	01/01	\$803

TASAS DE INTERÉS Y CARGA ANUAL EQUIVALENTE (CAE) DE SU TARJETA

	MONTO ROTATIVO	COMPRA EN CUOTAS	AVANCE EN EFECTIVO EN CUOTAS
Tasa de interés anual	21,48%	30,36%	30,36%
CAE (Carga Anual	31,83%	34,39%	27,13%

Estas tasas muestran cuánto le cobrarán al no pagar el total de su deuda (monto rotativo), al hacer compras en cuotas afectas a intereses y al realizar avances en efectivo. La CAE le sirve para comparar tarjetas. Por ejemplo, si usted tiene dos tarjetas, la tarjeta con la CAE más alta será menos conveniente para realizar esa operación.

CAE Prepago	
28,34%	
En caso de prepagitarjeta con otro medinanciamiento, ah cuando la CAE del crédito sea menor a la de prepago.	lio de orrará nuevo

	GLOSARIO
CAE (Carga Anual Equivalente)	Es un indicador expresado en porcentaje anual que refleja el costo del crédito, se calcula en base a un monto de 20 UF pagadero en 12 cuotas. Esta información sirve para comparar con otras tarjetas.
CAE Prepago	Es un indicador expresado en forma porcentual que refleja el costo total actual de su deuda a la fecha de facturación. En caso de prepagar con otro medio de financiamiento, una CAE del nuevo crédito que sea menor a la CAE prepago de esta tarjeta será un ahorro para Ud.
Comisión por Avance en Efectivo	Valor que se aplica a cada transacción de giro de dinero con cargo a su Tarjeta
Costo Monetario del Prepago	Es el monto que se paga para extinguir anticipadamente o prepagar la Tarjeta de Crédito
Gastos de Cobranza	Monto que se cobra por la gestión de cobranza extrajudicial y se aplica a clientes que tienen más de 20 días de atraso en el pago de su cuenta.
Impuesto al Crédito	Valor del impuesto Ley de Timbres y Estampillas D.L. 3.475 de beneficio fiscal. Aplica a todas las transacciones de crédito.
Interés de Mora	Interés generado por atrasos en el pago de su tarjeta. El interés moratorio se calcula desde el primer día de atraso en los pagos por tanto, en caso de que no pague en los plazos acordados, su deuda subirá por cada día de atraso.
Interés Rotativo o Refundido	Interés generado sobre el saldo no pagado entre el Monto Total a Pagar y el Pago Mínimo.
Mantención de Operación Mensual	Valor mensual destinado al pago de mantención de su tarjeta.
Tasa de Interés	Precio que usted debe pagar mensualmente por un préstamo. Por ejemplo, una tasa del 10%, quiere decir que le cobrarán 100 pesos por cada 1.000 pesos prestados.
Tasa de Interés Avance en Efectivo en Cuotas	Tasa de interés aplicable a los avances en efectivo que se hayan efectuado en cuotas en el periodo de facturación.
Tasa de Interés Compra en Cuotas	Tasa de interés aplicable a las compras en cuotas,
Tasa de Interés Monto Rotativo	Tasa de interés aplicable al saldo pendiente de pago o a la diferencia que hay entre el monto pagado y el monto facturado.

Figure 2: "Symbols without minimum" statement.









6. Conclusions and recommendations

This study shows that simplifying and explaining the different credit card sections improves its understanding, which may help people reduce their debt levels. In addition, based on these results, it is suggested to include warnings about the consequences of making different payments through symbols, and to preponderate the total amount to increase the probability of paying the total balance.

This study takes a significant step forward to concretely redesign the current credit card statement received by millions of people in Chile, facilitating its understanding and helping them to make more informed payment decisions. It is recommended to continue examining these results in the field through a randomized field experiment, including actual and long-term payment behavior. It is also recommended to examine the effect of nudges in the payment process when using digital platforms since these are commonly used to pay credit card debts. This study also provides the basis for making these changes.









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