

# FinTech and Consumer Financial Well-Being in the Information Age

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## Abstract

We analyze how FinTech adoption improves consumer financial decision-making. Using a regression discontinuity in time design, we exploit the exogenous introduction of a mobile application for a financial aggregation platform. In response, individuals accessed information about their transactions and bank account balances more often, which led to significant reductions in high-interest unsecured debt and bank fees. The magnitudes are economically significant: for the overall population, one additional monthly login reduced consumer debt by 14 percent over a 2-year period. Additionally, we complement our within-individual identification with cross-sectional evidence using a difference-in-differences estimation strategy. Our empirical finding that additional information about account balances helps to reduce consumer debt sheds light on the widespread use of such debt throughout the developed world, which has been a long-standing puzzle in the household-finance literature (Laibson et al., 2000).

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# 1 Introduction

How does access to information affect individual decision making? For decades, this has been one of the most fundamental questions in economics (e.g., [Stigler, 1961](#)). With the advent of the information age, and the surge of FinTech products consumers use (e.g., [mint.com](#), [personalcapital.com](#), [YNAB.com](#)), we would presume that people are better informed and equipped to make good choices. However, beyond measuring the adoption of new technology, actually quantifying its economic impact is challenging. We know that people of different generations and demographic backgrounds incorporate new technology into their lives at different rates ([Anderson, 2015](#)). But we know very little to date about how this affects actual outcomes, and whether any effects vary cross-sectionally in the population.

Sorting this out in a robust and careful way is challenging because it is typically impossible to deal with endogeneity, reverse causality, and omitted variables without making some leaps of faith. While it is intuitive that less costly access to information may increase welfare, it is also likely that higher wealth increase either the incentives to acquire information or the ease of accessing it.<sup>1</sup>

In this paper, we address these issues by using a unique data set from Iceland. A substantial fraction of the citizens in the country use a common on-line platform that consolidates all of their bank account information and transaction histories in one place. Before 2014, access to this personal financial information only occurred via the Internet on a desktop or laptop computer. On November 14, 2014, a mobile application was exogenously released, which gave users easier and remote access to bank account information. [Figure 1](#) shows the propensity to log in to the financial aggregation platform before and after the mobile app introduction, documenting that consumers indeed increased their information access in response to the availability of new technology. Before

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<sup>1</sup>In the United States, as of 2015, high income consumers were much more likely than low income consumers to use the Internet (97% versus 74%) and own a smartphone (87% versus 52%) ([Perrin and Duggan, 2015](#); [Perrin, 2015](#), see). Also, according to [Smit \(2014\)](#), this difference is greater in adults older than 65 years. In this age group, 90% of high income elderly people access the Internet, whereas only 39% of low income seniors go on-line.

turning to the effects this had, it is important to note that the mobile application did not offer consumers either notifications or financial advice before they actually logged in and it did not have a functionality to execute transactions. As such, any observable change in consumer outcomes that we document occurred because of less costly access to information and thus more frequent information acquisition, not because of notifications, financial advice, or more convenient transactions.

{Figure 1 around here}

In our data set, we have time-series information about the frequency and method of access to bank information (desktop vs. smartphone), which we can analyze together with demographic data, economic decisions (e.g., consumption and savings), channels through which consumers access credit (credit cards versus debit card overdrafts), and the resultant financial outcomes (consumer debt and bank fees). One key economic outcome that we focus on is the tendency for people to pay penalties in the form of interest on short-term uncollateralized debt and other fees, such as late and non-sufficient fund fees. No matter what an individual's utility function might be, paying lower bank fees in response to voluntarily acquiring more frequent information should improve their welfare.

We use a regression discontinuity in time design, where the time of the exogenous introduction of the mobile application is used to instrument logins. This allows us to isolate the causal impact of more information on economic outcomes. In the first stage, we estimate the change in an individual's propensity to log into their financial accounts, which characterizes how new technology affects access to information. In the second stage, we use the predicted jump in logins at the time of the app introduction to identify the per login effect of the app introduction on financial fee payments and other economic outcomes. In both stages, we include individual fixed effects to control for all time-invariant omitted factors or individual characteristics that could affect the economic outcomes we measure. Thus, we estimate a causal within-individual local average treatment effect (LATE). However, since the app was broadly adopted relatively quickly by all age groups

and we look at a long time period before and after the introduction of the app, we believe our results can be generalized.

Because the regression discontinuity in time design relies on time-series variation for identification, one potential challenge is a higher likelihood that important covariates are also discontinuous to the forcing variable over time. If other confounding events take place at the same time and affect adopters differently from non-adopters, our identification would be challenged. We undertake a number of steps to address this problem. First, we carefully analyze whether any other confounding institutional changes or new regulations occurred during our time period of the app introduction.<sup>2</sup> Second, we include controls for the month of the year and for concurrent economic conditions (e.g., interest rates, inflation, and unemployment). Third, we use different functional forms and bandwidths of time from the app introduction to alleviate concerns about time-series trends and time-varying confounds that we assume to change smoothly across the date of the experiment.<sup>3</sup> Finally, as a robustness check and to complement our within-individual time-series identification approach with cross-sectional identification, we also employ a difference-in-differences estimation strategy to document the effects of the app introduction on adopters versus non-adopters.

The mobile application helped consumers pay less financial fees. Based on just the raw data, Figure 2 shows the total bank penalties paid during our time series. Up until the introduction of the app, financial fees increased. But, once the app was introduced, there was a trend reversal and the amount of fees paid grew at a lower rate. Based on our regression results for the entire population, each added login was associated with approx-

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<sup>2</sup>To our knowledge, the only institutional change that occurred during our evaluation window was on December 14 2014, when a court ruling took place that addressed deceptive merchant fee practices. However, this ruling did not involve consumer financial fees. Furthermore, the central bank of Iceland was reducing interest rates marginally in November 2014, a potential confound that we address by controlling for the central bank policy rate directly. Furthermore, the time fixed effects control for all macroeconomic trends before and after the app introduction.

<sup>3</sup>As documented by Hausman and Rapson (2017), estimates may be biased if the time-series properties of the data are ignored, for instance in the presence of autoregressive processes. In contrast, tests for sorting or bunching near the discontinuity, as typically done for standard regression discontinuity (RD) designs, are irrelevant, making the methodology closer to an event study than a regression discontinuity design. Thus, unlike in standard RD designs, using large bandwidths around the threshold does not constitute a problem.

imately \$2.24 lower bank fees per month and \$1.77 lower overdraft interest. Accounting for the frequency of individual monthly logins, logging in at least once in response to the app introduction was associated with a decrease of \$19.62 in bank fees and \$15.47 in overdraft interest. Given that the average individual who adopted the app rolls over \$1,356 in overdraft debt (\$4,698 conditional on having overdraft debt) and pays around \$13 in interest expenses per month, when they look at their overdraft balance one more time per month, they reduce their overdrafts by approximately 14 percent over a 2-year period.<sup>4</sup>

{Figure 2 around here}

Furthermore, Figures 3 and 4 separately display the evolution of overdraft interest and late fees paid during our time series. We can see in the raw data that most of the reduction in overall fees is driven by overdraft interest, i.e., individuals roll over less high-interest consumer debt in response to accessing information about their account balances more often.

{Figures 3 and 4 around here}

Relative to the monthly expenditures during the sample period, the effect we document represents an economically meaningful change, especially for lower income households.<sup>5</sup> Moreover, our findings help to shed light on why high-interest consumer debt exists in such magnitudes, even though it is not consistent with standard preferences in life-cycle consumption models (Laibson et al., 2000). Indeed, the 2015 American Household Credit Card Debt Study estimates the total credit card debt owed by an average U.S. household to be \$15,762, which amounts to a total of \$733 billion. Our empirical

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<sup>4</sup>The use of a long time period allows us to generalize our effect. Furthermore, we find that this estimated effect does not change when we use alternative bandwidths of one fourth, one half, and two thirds of the bandwidth in our baseline specification. Given that the app had been quickly and broadly adopted, we believe we can generalize our estimated effects.

<sup>5</sup>We provide back-of-the envelope calculations to show that the average individual is plausibly better off logging in more as opposed to not logging into the app.

finding that consumers manage to reduce their debt holdings by paying more attention to it speaks to non-standard preferences and overconsumption problems as a likely explanation for the initial use of consumer debt ([Laibson et al., 2007](#)), rather than rational consumption smoothing in response to permanent income shocks when funds are tied up in illiquid savings ([Kaplan and Violante, 2014](#)) or rational consumption smoothing in response to transitory income shocks ([Keys, 2010](#); [Sullivan, 2008](#)).

Beyond making more responsible consumption-savings decisions after paying more attention to bank account balances, the observed drop in financial penalties could be explained by changes in how people used consumer credit. We find this to be the case as well. In the total population, adoption of the technology was associated with a 10.6% growth in credit card use relative to debit cards in managing short-term liabilities. Increasing credit card use is a rational response to having better information. Since credit cards offer a 30-50 day float to avoid paying interest for convenience users, compared to overdrafts where interest is incurred immediately, they are superior to consumers for very short-term debt holdings. However, such better liability management can only explain a fraction of our reduction in overdraft interest. We thus conclude that paying greater attention to finances itself causes more prudent consumption and savings decisions, which is also consistent with the fact that we observe most of the fee reductions in overdraft interest rather than late fees or non-sufficient fund fees. In other words, the savings appear driven by more prudent spending decisions instead of being relatively mechanical reductions in avoidable fees.

The academic profession has only hit the tip of the iceberg in characterizing the potential benefits and costs of technology on consumer financial decision-making. This is a nascent and growing literature. [Agarwal et al. \(2018\)](#) show that individuals learn to avoid late fees after having paid them initially. [Stango and Zinman \(2014\)](#) document that individuals respond to surveys about overdrafts by paying greater attention to account balances and incurring fewer fees. [Levi \(2015\)](#) shows that individuals respond to information about their net worth by increasing their savings in certain conditions. [Medina](#)

(2016) finds that reminders for timely payment reduce the credit card late fees that are paid. [Karlan et al. \(2016\)](#) show that text message reminders help consumers to avoid penalties.<sup>6</sup> Generally, these studies involve some sort of reminder or stimulus that induces people to change their behavior towards one specific form of avoidable financial fees. In contrast, in our study, we show that simply because individuals access information more frequently without receiving reminders, messages, or other stimuli, they reduce their high-interest consumer debt. Furthermore, a defining feature of our study is that we have information not only on individual financial standing at very high accuracy and frequency, but also on individual access to that information via logins to the financial aggregation app.

Consistent with our results, several previous studies have shown that the quality and channel through which information is accessed affects consumer knowledge and decision making. [Fernandes et al. \(2014\)](#) show that just-in-time access to on-line advice improves financial decision-making. [Lusardi et al. \(2015\)](#) show that on-line videos are more effective than standard materials like written disclosures when consumers make choices. [Carlin et al. \(2016\)](#) show that video content is beneficial in helping consumers to both choose better opportunities and avoid falling prey to deceptive advertising in retail financial markets, and are also drivers of social learning in these settings. On the other hand, in some circumstances, it is possible that having more access to information may lead to worse outcomes. As [Bernhardt and Cuevas \(2016\)](#) show, better access to information led to the *Felices y Forrados* consumer financial fiasco in Chile.

The recent rise of FinTech has certainly piqued the interest of the academic community. For example, [Buchak et al. \(2017\)](#) study the effect of FinTech on shadow banking. The authors show that because of different regulatory requirements, FinTech lenders account for the majority of the growth in shadow bank mortgage lending. [Philippon \(2016\)](#) studies the impact of FinTech on the financial industry and how it affects access

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<sup>6</sup>Other studies that analyze the determinants and effects of attention using logins to retirement, brokerage, and bank accounts are [Karlsson et al. \(2009\)](#); [Gherzi et al. \(2014\)](#); [Gargano and Rossi \(2017\)](#); ?.

to financial services. A review of the evolution of FinTech is provided by [Arner et al. \(2016\)](#).

The remainder of the paper is organized as follows. In Section 2, we describe the data and offer summary statistics. In Section 3, we explain our identification approach. In Section 4, we report our main results and discuss their robustness. Finally, Section 5 presents concluding remarks.

## 2 Data and summary statistics

We use data from Iceland that are collected by Meniga, a financial aggregation software provider to European banks and financial institutions.<sup>7</sup> Meniga’s account aggregation platform allows bank customers to manage all of their bank accounts and credit cards across multiple banks in one place by consolidating data from various sources (internal and external). Meniga’s financial feed reflects consumers’ financial lives in familiar social media style. This data set has already proved useful for studying the spending responses of individuals to income arrivals and how individuals transition into retirement ([Olafsson and Pagel, 2018a,b](#)).

Each day, the application automatically records all bank and credit card transactions, including descriptions as well as balances, overdraft, and credit limits. [Figure 5](#) displays screenshots of the app’s user interface. The first screenshot shows background characteristics that the user provides, the second one shows transactions, and the third one includes bank account information. The initial version of the app did not include elements of financial advice, but later versions flagged certain events (e.g., unusually high transactions, money deposits and low balance). Examples of this are displayed in [Figure 6](#). Furthermore, the figure shows a screenshot of the default options for messages

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<sup>7</sup>Meniga was founded in 2009 and is the European market leader of white-label Personal Finance Management (PFM) and next-generation online banking solutions, reaching over 50 million mobile banking users across 20 countries. In the US, comparable software is provided by [mint.com](#), [personalcapital.com](#), or [YNAB.com](#). Relative to these US software providers, Meniga is less focused on advice with respect to spending, saving, or credit cards as well as portfolio performance. The app thus offers a clean and simple overview over personal finances.

that are turned off except for receiving merchant offers (that are similar to groupon offers). Meniga expanded their merchant offer features recently, however, when the app got introduced, it did not sent those offers yet. Moreover, the app does not send push notifications, so that individuals would have to log in first to see messages or flagged data. Moreover, it is important to note that we do not find most of the reductions in late fees or non-sufficient fund fees, which should be helped by messages, but rather a general reduction in roll-over consumer debt. Contrary to some of the advertisements on the app’s website (the “international demo” on the Meniga homepage does not accurately reflect how the platform looks and functions in Iceland), users have to log in initially to see all messages and warnings.<sup>8</sup>

{Figures 5 and 6 around here}

In January 2017, the Icelandic population counted 338,349 individuals, 262,846 of which were older than 18. At the same time, Meniga had 52,545 users, which is about 20 percent of the adult individuals living in Iceland. We study 13,411 active users with complete records, i.e., for whom we observe all balances, salary arrivals, and transactions. In general, all individuals in our sample have passed an ”activity test” that is designed to verify that we are capturing all of their financial picture. More specifically, our sample of Meniga users is restricted to individuals with complete records, defined by four requirements. First, we restrict our sample to individuals for whom we see bank account balances and credit lines. Second, we restrict our sample to individuals for whom we observe income arrivals (this does not only include labor market income but also, e.g., unemployment benefits, pension payments, invalidity benefits, and student loans). The third requirement is that key demographic information about the user is available (age, sex, and postal code). The final requirement is that the consumption of each user must be

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<sup>8</sup>However, the app did not send these messages over the sample period that we are considering. Furthermore, the current version of the app asks for permission to send push notifications, but, to the best of our knowledge from having the app installed, does not actually send any.

credible, which we ensure by requiring at least 5 food transactions in at least 23 months of a 24 months period.

All the tables and figures we show (except for Table 4 which includes all active users that started using the software or app at some point), for instance, figure 2, are based on this final sample. In terms of demographic statistics, the final sample of users is not different from the overall sample and because Meniga’s service is marketed through banks, we can confirm that our sample is representative of the adult population of Iceland. For three generational categories based on when individuals are born, Baby Boomers (1946-1964), Generation X’ers (1965-1980), and Millennials (1981-2000), Table 1 summarizes the demographic data in our study and provides a comparison with those reported in the representative consumer survey of Statistics Iceland.

{Table 1 around here}

We aggregate the data to a monthly panel of individual logins, financial penalties, credit use, and consumption choices from November 2012 to November 2016. The data include information on how many times each individual logs in via the app or via a desktop. The app was introduced on November 14, 2014.<sup>9</sup> Because we are interested in debt expenses that might be avoided by having better information and allowing consumers to make small and relatively costless changes in their behavior, we consider three types of penalties: late payment interest, non-sufficient funds fees, and late fees. Additionally, we observe the interest expenses for individuals that hold overdrafts, which is the primary form of Icelandic high-interest unsecured consumer debt.

1 **Late-payment interest:** Credit card companies charge late-payment interest daily from the date a payment is due and payable to the date it is paid in full.

2 **Non-sufficient funds fees:** When there are insufficient funds or the overdraft limit is exceeded in the consumer’s current account in the event of attempted debit card transactions, the bank charges their account with fees.

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<sup>9</sup>We do not find any evidence of individuals linking more accounts following the app introduction.

3 **Late fees:** Fees assessed for paying bills after their due date.

4 **Interest:** An overdraft occurs when withdrawals from a current account exceed the available balance. This means that the balance is negative and hence that the bank provides credit to the account holder and interest is charged at the agreed rate. Virtually all current accounts in Iceland offer a pre-agreed overdraft facility, the size of which is based upon affordability and credit history. This overdraft facility can be used at any time without consulting the bank and can be maintained indefinitely (subject to ad hoc reviews). Although an overdraft facility may be authorized, technically the money is repayable on demand by the bank. In reality, repayment demands are rare because the overdrafts are profitable for banks and expensive for customers.

Table 2 displays summary statistics about the penalties incurred and the use of various forms of consumer credit by people in our sample. The table displays average penalties per month and per individual as well as their standard deviations across individuals. Comparison is made between consumers who logged in using the app to those who did not, within windows of time around the app introduction that varied from 3 months to 18 months. Total and individual sources of financial penalties were lower for consumers who used the cell phone app. Additionally, consumers who used the app were more likely to use credit cards to cover their expenditures. Of course, Table 2 does not allow us to make causal claims yet, as use of the app and financial performance are endogenous, which our identification strategy ameliorates.

{Table 2 around here}

Overall, individuals in Iceland enjoy access to substantial consumer credit and pay considerable financial fees for it. In this sense, Iceland is very similar to the US. As can be seen in Table 3, individuals hold approximately \$4,698 in overdrafts conditional on having overdraft debt (in Iceland, individuals typically pay off their credit card in full

and use overdrafts to roll-over debt). Nevertheless, they still enjoy substantial liquidity, i.e., further borrowing capacity before they hit their limits, i.e., \$11,169 on average. Furthermore, the table shows average income, spending, balances, limits, and financial fees for adopters and non-adopters. None of the differences between the groups are statistically significant in the raw data, which is reassuring, though the validity of our main identification strategy will not rely on a comparison of adopters and non-adopters.

While Table 3 shows the comparison of our final sample of adopters and non-adopters for which we observe all data two years before and after the app introduction, Table 4 displays a comparison of financial fees paid as well as overall financial standing for all active users. It can be seen that those individuals that started using the software at least two years before the app introduction have somewhat higher income and consumer debt though none of the differences are statistically significant.

{Table 3 around here}

We collect income and spending data in the panel by extracting it from the PFM system, which has already been categorized by a three tiered approach.<sup>10</sup> The system categorizes the income into 20 different income categories. Regular income categories are child support, child benefits, dividends, parental leave benefits, pensions, housing benefits, rental benefits, rental income, salary, student loans, and unemployment benefits. Irregular income categories are grants, other income, insurance claims, investment transactions, loan write-offs, reimbursements, tax rebates, travel allowances, and lottery winnings. Total household income is defined as the sum of regular and irregular income of spouses.

Spending is categorized into 15 categories. The spending categories are groceries, fuel, alcohol, ready made food, home improvement, transportation, clothing and accessories, sports and activities, pharmacies, media, bookstores, thermal baths, toy stores, insurances, and various subcategories of recreation (e.g., cinemas, gaming, and gambling).

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<sup>10</sup>This three-tiered approach uses system rules, user rules and community-rules. More details are available from the authors upon request.

For the purposes of our empirical analysis, we define two categories of spending. The first contains necessities such as groceries, fuel, and pharmacy. The second includes discretionary entertainment such as alcohol, restaurant/takeout, lottery, gambling, gaming, and cinema. Table 4 displays summary statistics about the income and spending categories for all active users, as well as spending statistics from the representative consumer survey of Statistics Iceland. All numbers have been converted to US dollars. To the extent that the categories match, we find very similar figures in our sample as in the representative consumer survey. Thus, our sample appears to be fairly representative, not only in terms of demographics, but also with respect to income and spending.

Also according to Table 4, our sample characteristics are similar to US data. The average age of our sample is 38 whereas the average age in the US population in 2015 was 38. The percentage of women in our sample is 46% whereas the US representative was 51% in 2015. The mean income in the U.S. population in 2015 dollars per adult member was \$3,266, whereas the individual monthly mean income in our sample is \$3,783.<sup>11</sup>

{Table 4 around here}

### 3 Empirical Strategy

We use a regression discontinuity in time design that exploits the discontinuity in individual access to the financial aggregation platform that arose when the mobile application was introduced on November 14, 2014. The timing of the app introduction is plausibly exogenous to individual characteristics but caused some individuals to log in more often and is thus a valuable source of identifying variation. We exploit this to estimate a causal effect of less costly access to information on spending as well as financial penalties. The instrumental variable design may be implemented by the following two-equation system:

$$Y_{it} = \alpha_i + \beta L_{it} + \mathbb{1}[t \geq c] f_l(t - c) + \mathbb{1}[t < c] f_r(c - t) + \epsilon_{it}, \quad (1)$$

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<sup>11</sup>All US numbers stem from the US Census Bureau’s American Community Survey (ACS) in 2015.

$$L_{it} = \gamma_i + \mathbb{1}[t \geq c] (g_l(t - c) + \lambda) + \mathbb{1}[t < c] g_r(c - t) + \nu_{it}, \quad (2)$$

where  $Y_{it}$  is a measure of the economic outcomes (i.e., financial penalties or spending categories) for individual  $i$  at time  $t$ ,  $\alpha_i$  and  $\gamma_i$  are individual fixed effects,  $c$  is the time of the app introduction, and  $f_l$ ,  $f_r$ ,  $g_l$ , and  $g_r$  are unknown functional forms that capture the effect of time from the mobile app introduction on economic outcomes. In all specifications, we cluster standard errors at the individual level as standard in high-frequency individual-level panel data (see, e.g. [Baker, 2014](#)).

The interpretation of Equation (1) is that it describes the average economic outcomes for individuals under alternative assignments into higher frequency logins, controlling for any other relationship between the time from the mobile app introduction and economic outcomes. Since logging in more often is not randomly assigned, logins are likely correlated with the error component in a simple ordinary least squares (OLS) regression of economic outcomes on logins. As such, OLS estimates of (1) would not have any causal interpretation. Therefore, we estimate the two-equation system by two-stage least squares (2SLS) using the discontinuity in logins caused by the app introduction as an instrument. The 2SLS estimate of  $\beta$  characterizes the causal effect of technology on economic outcomes.<sup>12</sup>

We estimate the system of equations using both polynomial and local linear regressions. The only restriction on the functional forms that capture the effects of time,  $f_l$  and  $f_r$  ( $g_l$  and  $g_r$ ), is that they must differ at  $c$  by  $\lambda$ . We estimate  $\lambda$  as the jump in logins at the mobile app introduction date in the first-stage regression. Then, we estimate  $\beta$  in the second stage. Our empirical design thus uses the discontinuities in the relationship between the mobile app introduction and higher frequency of logins to identify the causal effect of observing financial accounts on economic outcomes, i.e., by distinguishing the

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<sup>12</sup>This 2SLS approach faces the problem that the endogenous variable is a dummy and thus has a non-linear probability distribution which the second-stage regression relies upon. In such settings, [Angrist and Pischke \(2008\)](#) advise garden-variety 2SLS for dummy endogenous variables rather than the use of forbidden plug-in regressions or nonlinear fitted values as instruments, which also ensures that standard errors are computed correctly. Thus, we stick to the standard 2SLS approach as our preferred specification but ensured that we find similar marginal effects using alternative methods.

nonlinear and discontinuous function,  $\mathbb{1}[t \geq c]$ , from the smooth function  $f(t)$ .

The key identification assumption that underlies our approach is that  $f(\cdot)$  is a continuous function. Intuitively, the continuity assumption requires that differential assignment of logging in more often is the only source of discontinuity in outcomes around the time of the mobile app introduction,  $c$ , so that unobservables vary smoothly as a function of time from app introduction and, in particular, do not jump at the time of the introduction. As such, all potential time-varying confounds must be assumed to change smoothly across the date of the experiment. Formally, then, the conditional mean function,  $E[Y_{it}|t - c]$ , is continuous in  $(t - c)$  at 0, or equivalently  $E[\epsilon_{it}|t - c]$  is continuous in  $(t - c)$  at 0. Under this assumption the treatment effect,  $\beta$ , is obtained by estimating the discontinuity in the empirical regression function at the point where the probability of the treatment dummy jumps at the assignment threshold and can be given a causal interpretation.

As shown in [Lee \(2008\)](#) and [Lee and Lemieux \(2010\)](#), smoothness of the density of the treatment-determining variable is sufficient for the continuity assumption to hold. In our case, this assumption explicitly allows for individuals to have some control over their value of the assignment variable. As long as this control is imprecise, which it clearly is in our case since they did not control when the app was introduced, assignment to higher login frequencies will be randomized around the threshold.

We can examine whether this quasi-random variation in the cost of accessing information changes individuals' economic outcomes by estimating the following reduced form model:

$$Y_{it} = \tau_i + \mathbb{1}[t \geq c] (f_l(t - c) + \pi) + \mathbb{1}[t < c] f_r(c - t) + \xi_{it}, \quad (3)$$

where  $\pi$  can be interpreted as an “intention-to-treat” (ITT) effect of the mobile app introduction on economic outcomes. The ratio of the reduced form coefficient  $\pi$  and the first-stage coefficient  $\lambda$  is numerically equivalent to the 2SLS estimate of  $\beta$ , provided that the same bandwidth is used in equations (2) and (3) in the local linear case and the same order of polynomial is used for  $f$  and  $g$  in the polynomial regression case, since the

two-equation system is exactly identified. The ITT effect captures the effect of the app introduction on the whole population.

The IV estimates of Equation (2) use discontinuities in the relationship between the mobile app introduction and higher frequency of logins to identify the causal effect of observing financial accounts on economic outcomes at the same time that any other relationship between time from the app introduction and economic outcomes measured by financial fees is controlled for by including a smooth function of absolute time from the app introduction as a control. We use both a global polynomial approach and a local linear approach with varying bandwidths around the app introduction.

In the context of the causal model above, the instrumental variable estimate should be interpreted as an average effect of the increased logins for individuals whose log in behavior was influenced by the app introduction. This group may not necessarily be a good representation of the entire population of individuals. Thus, we estimate a local average treatment effect (LATE) rather than an average treatment effect. That said, the app has been broadly adopted quickly over the long time period that we consider, as can be seen in Figure 8, which means that we do not identify off of a very specific part of the population.

The identification approach relies on a single exogenous event, the app introduction. This event's effects on economic outcomes could be confounded if other events happened or things changed around the same time, which affected adopters differently than non-adopters. As we discuss and analyze in Sections 4.5 and 4.4, our analysis is robust to a difference-in-differences approach and to the best of our knowledge, no confounding event took place around the same time.

Frequently in regression discontinuity designs, there is a trade-off between having two periods that are as close in time to each other as possible (obtained by reducing the time window around the app introduction) and having a longer sample period (by widening the window). In our case, this is not a problem here because individuals who start using the app later are more similar to those that never use it at all than to individuals who

start using it immediately after the introduction. However, to address this we report our findings for several time windows (i.e. 6, 12, and 18 months before and after the app introduction).

As discussed by [Hausman and Rapson \(2017\)](#), regression discontinuity in time estimates may be biased if the time-series properties of the data are ignored, for instance in the presence of autoregressive processes. Whenever a potential reduction of fees itself would cause a further reduction in fees, our estimates could be biased upwards. While autoregression is a potential concern in many environmental applications of regression discontinuity in time designs, it is probably not a concern here. After all, the wealth effect from a small and transient reduction in fees is not likely to, in and of itself, cause a persistent drop in the propensity for an individual to incur financial fees in the future. While serial dependence in the residuals might arise, we address this by clustering standard errors at the individual level. Finally, as in a standard regression discontinuity design, one may worry about strategic behavior around the threshold. However, using time as an assignment variable makes this irrelevant. But, one might still worry about a type of sorting where individuals start using the platform only when the app is introduced (i.e., individuals only use the aggregation service because it can be accessed via the app). Because we only consider individuals in our study who were already using the financial aggregation platform before the app introduction, we do not have to worry about this concern.

It is important to note that all of our results are estimated including individual fixed effects, which control for all time-invariant observable or unobservable characteristics. A potential issue is that individual characteristics for those individuals who adopt the new technology may change around the introduction of the app. Our difference-in-differences specification in [Section 4.5](#) should address this concern.

## 4 Results

### 4.1 Logins

Based on the raw data plotted in Figure 1, there is a clear discontinuity in the propensity of individuals to log into their financial accounts around the introduction of the mobile app. This is further described in Table 5, which gives some summary statistics about logins for the age and gender demographic categories. Before the introduction of the mobile app, men appeared more attentive to their accounts than women and this gap increased once the app became available. Figure 7 shows that for every age group, men were more likely to access their personal information via the mobile app right after its introduction. By August 2016, however, approximately the same fraction of men and women had adopted the new technology (43% versus 39%). Figure 8 also characterizes this trend by plotting the cumulative adoption of the smartphone technology through time. We can observe a fairly quick and broad adoption of the app by both genders and all age groups, this alleviates concerns that we are documenting an effect identified off of a very specific fraction of the population.

{Table 5, Figure 7, and Figure 8 around here}

People of different generations adopted the new technology at much different rates. According to Table 5, the number of logins for Millennials more than doubled, whereas logins for Baby Boomers increased at a lower rate. In November 2014, even though the app was introduced halfway through the month, the number of app logins accounted for 60% of total logins for Millennials, whereas it only accounted for 28% of logins for Baby Boomers. By August 2016, roughly, 52% of Millennials had used the app, compared to only 27% of Baby Boomers.

Empirical analysis confirms these trends in the first stage regressions for the entire population. Table 6 shows our estimates using a 24-month window before and after the app introduction. Column (1) shows a significant jump in logins after the mobile app

introduction. Based on the results, individuals were 9.23% more likely to log in each month after the app was made available. That is, individuals logged in 0.8 more times per month after the new technology was available. Both of these results are economically and statistically significant.

{Table 6 around here}

## 4.2 Financial Outcomes

The raw data in Figure 2 suggests that less costly access to information led to fewer fees and interest payments for consumer debt. The figure plots the raw average of each month's total financial fee payments for the estimation sample and fits two linear regression lines, one up until November 2014 and one after November 2014. Up until the introduction of the app, financial fees increased, because the economy was expanding. But after the app introduction, this trend reversed.<sup>13</sup> We do not see a discontinuity in this figure, as for the logins in Figure 1, which is due to the gradual adoption of the app by different individuals, but we clearly see a change in the slope of financial fees paid.

{Table 7 around here}

This is further characterized in Table 6. Column (2) shows the estimate for coefficient  $\pi$  in Equation (3), the intention-to-treat effect of the mobile app introduction on financial fee payments. Column (3) shows the 2SLS IV estimate for coefficient  $\beta$  in Equation (1), the causal LATE effect of the mobile app introduction. Column 3 shows that in the overall population, each extra login was associated with a \$2.24 reduction in financial fees. This

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<sup>13</sup>Economic growth around the time of the app introduction slowed and then picked up again but unless the economic trend changed discontinuously in November 2014 and affected adopters differently from non-adopters, macro-economic circumstances cannot explain our results as discussed in Section 4.4. Moreover, [Hundtofte et al. \(2018\)](#) show that individuals borrow more in good economic times rather than when they get hit by income shocks such as unemployment. This is what we see in the upward trend of overdraft payments up until the introduction of the app, i.e., Figure 3.

effect was similar for men and women and did not differ reliably across generations.<sup>14</sup> Accounting for the frequency of individual monthly logins, logging in at least once in response to the app introduction was associated with a decrease of \$19.62 in bank fees and \$15.47 in overdraft interest. As can be seen in Table 3, the average individual who adopted the app rolls over \$1,356 in overdraft debt (\$4,698 conditional on having overdraft debt) and pays around \$13 in interest expenses per month. Thus, when they look at their overdraft balance one more time per month, they reduce their overdrafts by approximately 14 percent over a 2-year period.

A back-of-the envelope calculation suggests that the average hourly wage is approximately  $\$3,783 / (52 / 12) / 40 \approx \$22$  per hour, assuming a 40 hour work-week. Only if the average individual spends more than  $\$19.62 / \$22 = 0.89$  hours with the app per month, which appears implausible, he or she would be better off not logging into the app at all. The savings of a marginal log in is  $\$2.24 / \$22 = 0.1$ , i.e., worth 6 minutes of work, which also appears like an implausible time commitment to log in to the app. Furthermore, the 14 percent reduction in overdrafts over a two-year period is substantial and has overall interest costs of  $0.14 \$1,356(1 + 0.13 / 12)^{24} = \$246$  or \$852 conditional on overdraft debt (the prevailing annualized overdraft interest rate at the time of the app introduction was approximately 13% (see Figure 9) and is compounded at the monthly level).

The choice of length of time around the app introduction on November 14, 2014, is important as it affects the smoothing of our data. It is therefore important to show that our results are robust to varying the bandwidth. Table 8 therefore presents the results of our analysis where we vary the bandwidth around the app introduction and results using global polynomials up to order four. The statistical and economic significance of our estimates remain largely unchanged. Reassuringly, the results show that the effects do not differ by much depending on the specification.

{Table 8 around here}

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<sup>14</sup>Estimates are reported in ISK, to obtain the USD estimates, the coefficients can simply be divided by 100. This adjustment reflects the approximate exchange rate over our sample period.

### 4.3 Credit Use and Expenditures

Beyond knowing that individuals who log in more reduce their financial fee payments, the exact channel by which individuals save is hard to detect even with comprehensive transaction-level data. A potential channel might be the tendency of individuals to use credit versus debit cards. After all, overdraft interest is a substantial fraction of financial fees paid, and, as shown in Table 2, consumers who used the app were more likely to use credit cards to make expenditures.

We explore this further in Table 9 where we measure the impact of logins on the fraction of expenditures paid by credit cards. According to the results, for the entire population, each additional login was associated with a 2.36% increase in the fraction of expenditures purchased with a credit card.<sup>15</sup> Likewise, using a dummy variable for a login at any time using the app, the fraction of purchases made with a credit card increased by approximately 20.36%. Table 8 confirms these results with shorter symmetric bands of time around the app introduction and global polynomial controls up to order four.

{Tables 9 and 10 around here}

These results provide a rational explanation for why individuals had some economic gain from the new technology. For consumers with low savings, use of a credit card is superior to overdrawing a bank account with a debit card, when managing short-term liquidity needs. Credit cards typically provide a 30-50 day float until interest is charged, whereas overdraft fees are incurred immediately. A simple back-of-the-envelope calculation can be used to quantify the impact of using credit cards rather than debit cards on overdraft interest payments. A 2.36% increase in monthly spending on credit cards times an average monthly expenditure of \$1,580 equals \$32.2 in additional expenses paid via credit cards rather than debit cards. This translates to a monthly interest savings of  $32.2(0.13/12) = \$0.348$ , as the prevailing overdraft interest rate at the time of the app introduction was approximately 13% (see Figure 9).

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<sup>15</sup>This growth rate is computed by dividing 0.0106 by the base rate of 0.45.

{Figure 9 around here}

Nevertheless, the monthly savings associated with better short-term liquidity management cannot explain the entire 14 percent decrease in overdraft debt over a 2-year period. It seems that the more frequent observation of balances also makes them more salient and that this helps consumers to reduce them.

#### 4.4 Discussion of Robustness

As we have reiterated, the app introduction was not associated with more frequent reminders or notifications about individual accounts. Users only could view notifications after they logged in. Individuals were also not able to sign up to receive reminders or push notifications about events in their accounts (e.g., when they had unpaid bills). The only messages by the app that took place during our time series are merchant offers that were called card-linked offers (CLOs). However, these did not get launched until mid-2015 and were not prevalent until 2017. Since this took place well after the app introduction, we do not believe these offers constitute a problem to our specification or help account for the reduction in financial fees we observe. In line with the absence of messages about low balances or payments, we find only very small reductions in late fees and non-sufficient fund fees and most reductions in overdraft interest.

Another potential concern is whether our analysis could be confounded by other events that changed around November 2014, such as regulation changes or macroeconomic events. The only regulation change that we are aware of is a court ruling on December 14, 2014 that addressed deceptive merchant fee practices. As this did not involve consumer fees at all, we do not consider this to materially affect our analysis. Additionally, since our findings are robust to a difference-in-differences specification, it is unlikely that this regulation had any effect on consumers. Appendix A displays all the Factiva economic news search results for Iceland over November 2014 to analyze potential confounding events. Any discontinuous changes should have been noticed and reported

as economic news in November 2014, which, however, we do not find in the Factiva search reports. What many articles are about is that the Icelandic central bank took another step in reducing interest rates in November 2014 (the interest rate displays a general downward trend over 2014 and 2015 although overdraft interest payments are trending upwards). This is a potential confounding event that we address by directly controlling for the central bank policy rate as we now briefly discuss. Without doubt, other macroeconomic conditions, such as personal and government consumption, output, or economic sentiment, changed as well over the period. However, to the extent that these did not change discontinuously in November 2014, our identification strategy is not affected.

As mentioned, we reviewed several macroeconomic indicators and conditions around the event and only found one that could be considered concerning. There was a small decrease in interest rates around the time of the app introduction (Figure 9). This could be a potential concern since this would directly affect interest expenses, which are part of the financial fees that we calculate. If adopters were disproportionately indebted, then a discontinuous change in the overdraft interest rate could decrease their interest expenses more. But, there are several reasons we do not think this is problematic. First, when we directly control for such changes in the central bank policy rate, which determines changes in overdraft interest rates, we do not observe a change in our estimates. Second, our findings are robust to using a difference-in-differences approach that compares adopters of the technology to non-adopters before and after the app introduction. Last, we observe reductions in late fees and non-sufficient fund fees, which are not tied to the interest rate. Indeed, Figure 4 shows the same trend reversal in late fees in the raw data.

A final concern might be that the financial crisis of 2008 affected Iceland differently than other countries where consumer debt is prevalent or could have influenced our findings. After the crisis of 2008, Iceland recovered quickly and experienced high GDP growth and low unemployment during our entire sample period. This recovery has been attributed to its welfare system (Olafsson, 2016). Additionally, as it turns out, Iceland is similar to many other economies, including the US, with regard to the use of consumer

debt. As can be seen in Table 3, individuals in Iceland hold approximately \$4,698 in overdrafts conditional on having overdraft debt (in Iceland, individuals typically pay off their credit card in full and use overdrafts to roll-over debt). Nevertheless, they still enjoy substantial liquidity because they have additional borrowing capacity before hitting their limits, i.e., \$11,169 on average. In comparison, in the US, the average credit card debt for individuals who roll it over is approximately \$4,000 in the Survey of Consumer Finances (SCF) data and individuals also enjoy substantial borrowing capacity. Thus, we believe that our results can be generalized to the US and other European countries with relatively large consumer debt holdings, such as the UK, Spain, and Turkey.

## 4.5 Difference-in-differences estimation

While the regression discontinuity in time design is our preferred identification approach, we want to further alleviate concerns that factors other than the introduction of the mobile app are driving our results and perform a difference-in-differences estimation. We define “inactive” users as a control group and individuals who use the app in the first six months after its introduction as the “treatment” group. While the control group are not users of the app, they still meet our sample requirements of having complete records over the entire sample period, i.e., they linked all accounts and we observe regular salary and grocery transactions.

Figure 10 provides an illustration for the difference in logins between the treatment and control groups, before and after the mobile app introduction. The trends in the average number of logins before the smartphone introduction were almost parallel between the groups. However, after the introduction, the logins for adopters spiked.<sup>16</sup> So, it appears that the two groups experienced different changes in accessing bank account information within a narrow time frame, but had parallel trends before the app introduction. Furthermore, as can be seen in Table 3, the spending, income, and balances

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<sup>16</sup>There is a discrete jump in logins at the time of the app introduction and no pre-introduction run-up. The increase in the figure is an artifact that arose when we created the graph and made the lines continuous.

statistics of adopters and non-adopters are not significantly different from each other before the app introduction. That also reassures us that we consider two samples that match on observable characteristics.

{Figure 10 around here}

We estimate the following regression model:

$$Y_{it} = \alpha + \beta X_{it} + \tau T_i + f(t - c) + \gamma \mathbb{1}[t \geq c] T_i + \epsilon_{it}, \quad (4)$$

where treatment status is defined as

$$T_i = \begin{cases} 0 & \text{if no mobile logins and no desktop logins in the year before the app intro} \\ 1 & \text{if at least one mobile login in first 6 months after app intro} \end{cases}$$

In the model, the effect of the time from the app introduction on the outcome variable of interest is captured by the function  $f(t)$  and we seek to analyze  $E[Y_{it}|T_i]$ . If the correct specification of the control function  $f(t)$  is used (i.e. the true conditional mean function  $E[\omega_i|T_i]$ ), it will capture all dependence between  $T_i$  and  $\epsilon_{it}$  so that the conditional mean independence assumption will hold ( i.e.,  $E[\epsilon_{it}|T_i] = 0$ ).

This procedure renders consistent and unbiased OLS estimates in the case of linear control functions. In this case, the causal effect of the treatment variable  $T$  on the outcome variable  $Y_{it}$  is captured by  $\gamma$  (Hahn et al., 2001). One problem is that this regression-based estimation approach requires specification of the functional form  $f(\cdot)$  and any misspecified control function might produce inconsistent estimates. However, by including the interaction term between the time from the app introduction and the treatment dummy, we allow the slope coefficients to differ on each side of the threshold. In the baseline specification, we use polynomials of time (months) from the app introduction but we furthermore check that our estimates are robust to allowing for different functional

forms of the time control function.

The results are in Table 11. The difference-in-differences estimates show that the mobile app led to a sizable and a statistically significant reduction in total bank fees, late fees, and overdraft interest. The estimates show an approximately \$4.68 reduction in total bank fees when comparing individuals that started logging in more with the use of the mobile app as compared to inactive users.

{Table 11 around here}

While we estimate a large effect on overdraft interest in our main specification in Section 4.2, the difference-in-differences estimates are driven by late fees. This can be explained by the fact that we compare adopters to inactive users in the difference-in-differences specification while we compare adopters to their previous selves in our main specification, and we would therefore not necessarily expect the estimated effects to be the same.

Our findings are consistent with the cross-sectional relationship between financial fees and logins that we observe in the raw data. Figure 11 shows the averages of total bank fees, late fees, and overdraft interest by the number of monthly logins. We can see that in the cross-section of individuals, fewer logins are associated with higher overdrafts and higher late fees.<sup>17</sup>

{Figure 11 around here}

## 5 Concluding Remarks

In this study, we analyze the effect of the introduction of a mobile app by a financial aggregator which eases their consumers' plight to gather information and make good choices in two ways. First, it lowers search costs and makes finding personal information

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<sup>17</sup>See ? for an in-depth analysis of the within-individual attention patterns.

easier. Second, it makes financial information more salient. This latter mechanism is very important for consumers in retail financial markets. According to [Loewenstein et al. \(2014\)](#) “[t]here are serious limitations on the amount of information to which people can attend at any point in time” and “[d]isclosures are so ubiquitous [...] that it would be impossible for people to attend to even a fraction of the disclosures to which they are exposed.” Similarly, [Hirshleifer and Teoh \(2003\)](#) note that “[l]imited attention is a necessary consequence of the vast amount of information available in the environment, and of limits to information processing power.” Given this limited attention span, consumers tend to focus on the most prominent stimuli or salient information. By consolidating each user’s financial accounts, Meniga’s platform helps to reduce the costs of information access and the mobile application makes that access clearer to the consumers that use it.

We document and quantify the effects that less costly access to information about financial accounts has on consumers in the market. We find a substantial reduction in financial fee payments in response to accessing information more often. This effect should be welfare enhancing given that individuals log in voluntarily and the time costs of logging in are very small. The decrease in financial fee payments is driven by overdraft interest. In fact, people reduce their roll-over consumer debt by about 14 percent in a 2-year period, which carries high interest costs as it is unsecured. As noted before, since the app does not send reminders or notifications, the decreases in high-interest consumer debt that we document results from increased attention to personal finances.

That people reduce their overdrafts by paying more attention to them may be informative about how the overdrafts are accumulated in the first place. The leading but competing economic explanations for the use short-term consumer debt are the following: 1) time-inconsistent preferences and overconsumption problems ([Laibson et al., 2000, 2007](#)) or 2) a desire to smooth income fluctuations in the presence of illiquid savings ([Kaplan and Violante, 2014; Keys, 2010; Sullivan, 2008](#)). Our findings may speak to the former rather than the latter mechanism. After all, if individuals pay more attention to their finances and then reduce their overdrafts, we could infer that they were not

happy with holding large overdrafts. Thus, our findings are relevant for policy-makers and consumer protection. Moreover, the analysis in this paper contributes to a small but growing literature on technology and economic outcomes. Given the regime shift we experienced over the last decade associated with on-line education, social learning, and electronic access to information, future study in this area appears warranted.

## References

- Agarwal, S., J. Pan, and W. Qian (2018). Age of decision: Pension savings withdrawal and consumption and debt response. *SSRN 2487658*.
- Anderson, M. (2015). Technology device ownership: 2015. Report, PEW Research Center.
- Angrist, J. D. and J.-S. Pischke (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.
- Arner, D. W., J. N. Barberis, and R. P. Buckley (2016). The evolution of fintech: A new post-crisis paradigm? UNSW Law Research Paper 2016-62, University of Hong Kong Faculty of Law Research.
- Baker, S. (2014). Debt and the consumption response to household income shocks. Working paper, Stanford University.
- Bernhardt, D. and C. Cuevas (2016, May). The pied piper of pensioners. Working Paper.
- Buchak, G., G. Matvos, T. Piskorski, and A. Seru (2017, March). Fintech, regulatory arbitrage, and the rise of shadow banks. Working Paper 23288, National Bureau of Economic Research.
- Carlin, B. I., L. Jiang, and S. Spiller (2016). Millennial-style learning: Search intensity, decision-making, and information-sharing. *Management Science*.
- Fernandes, D., J. G. L. Jr., and R. G. Netemeyer (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science* 60(8), 1861–1883.
- Gargano, A. and A. G. Rossi (2017). Does it Pay to Pay Attention?
- Gherzi, S., D. Egan, N. Stewart, E. Haisley, and P. Ayton (2014). The meerkat effect: Personality and market returns affect investors' portfolio monitoring behaviour. *Journal of Economic Behavior & Organization* 107, 512–526.
- Hahn, J., P. Todd, and W. V. d. Klaauw (2001). Identification and estimation of treatment effects with a regression-discontinuity design. *Econometrica* 69(1), pp. 201–209.
- Hausman, C. and D. S. Rapson (2017). Regression discontinuity in time: Considerations for empirical applications. Technical report, National Bureau of Economic Research.
- Hirshleifer, D. and S. H. Teoh (2003). Limited attention, information disclosure, and financial reporting. *Journal of Accounting and Economics* 36(1-3), 337–386.
- Hundtofte, S., A. Olafsson, and M. Pagel (2018). Credit smoothing.
- Kaplan, G. and G. L. Violante (2014). A model of the consumption response to fiscal stimulus payments. *Econometrica* 82(4), 1199–1239.
- Karlan, D., M. McConnell, S. Mullainathan, and J. Zinman (2016). Getting to the top of mind: How reminders increase saving. *Management Science* forthcoming.
- Karlsson, N., G. Loewenstein, and D. Seppi (2009). The ostrich effect: Selective attention to information. *Journal of Risk and uncertainty* 38(2), 95–115.
- Keys, B. J. (2010). The credit market consequences of job displacement. *The Review of Economics and Statistics*.
- Laibson, D., A. Repetto, and J. Tobacman (2000). A debt puzzle. Technical report, National Bureau of Economic Research.
- Laibson, D., A. Repetto, and J. Tobacman (2007). Estimating discount functions with consumption choices over the lifecycle. Technical report, National Bureau of Economic Research.
- Lee, D. S. (2008). Randomized experiments from non-random selection in u.s. house

- elections. *Journal of Econometrics* 142(2), 675 – 697. The regression discontinuity design: Theory and applications.
- Lee, D. S. and T. Lemieux (2010, June). Regression discontinuity designs in economics. *Journal of Economic Literature* 48(2), 281–355.
- Levi, Y. (2015). Information Architecture and Intertemporal Choice: A Randomized Field Experiment in the United States.
- Loewenstein, G., C. R. Sunstein, and R. Golman (2014). Disclosure: Psychology changes everything. *Annual Review of Economics* 6(1), 391–419.
- Lusardi, A. M., A. Samek, A. Kapteyn, L. Glinert, A. Hung, and A. Heinberg (2015, 12). Visual tools and narratives: new ways to improve financial literacy\*. *Journal of Pension Economics and Finance*, 1–27.
- Medina, P. (2016). Selective attention in consumer finance: Experimental evidence from the credit card market. *Working Paper*.
- Olafsson, A. (2016). Household financial distress and initial endowments: Evidence from the 2008 financial crisis. *Health Economics* 25, 43–56. hec.3426.
- Olafsson, A. and M. Pagel (2018a). The liquid hand-to-mouth: Evidence from a personal finance management software. *The Review of Financial Studies* 31(11), 4398–4446.
- Olafsson, A. and M. Pagel (2018b). The retirement-consumption puzzle: New evidence from personal finances. Working Paper 24405, NBER.
- Perrin, A. (2015). Social media usage: 2005-2015 - 65% of adults now use social networking sites - a nearly tenfold jump in the past decade. Report, PEW Research Center.
- Perrin, A. and M. Duggan (2015). Americans’ internet access: 2000-2015 - as internet use nears saturation for some groups, a look at patterns of adoption. Report, PEW Research Center.
- Philippon, T. (2016, August). The fintech opportunity. Working Paper 22476, National Bureau of Economic Research.
- Smit, A. (2014). Older adults and technology use: Adoption is increasing, but many seniors remain isolated from digital life. Report, PEW Research Center.
- Stango, V. and J. Zinman (2014). Limited and varying consumer attention: Evidence from shocks to the salience of bank overdraft fees. *The Review of Financial Studies* 27(4), 990–1030.
- Stigler, G. (1961). The economics of information. *Journal of Political Economy* 69.
- Sullivan, J. X. (2008). Borrowing during unemployment unsecured debt as a safety net. *Journal of human resources* 43(2), 383–412.

# Figures and Tables

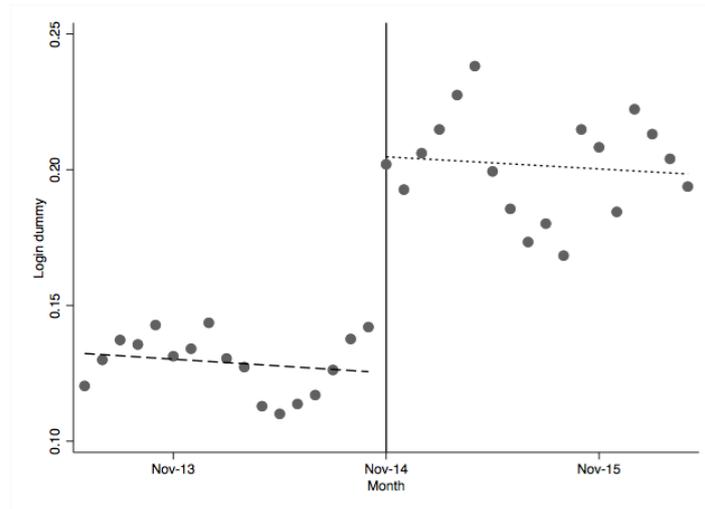


Figure 1: Propensity to log in around the app introduction. Each raw data dot represents the fraction of individuals who logged in in any given month. The lines are simple linear fits through the data points before and after the app introduction.

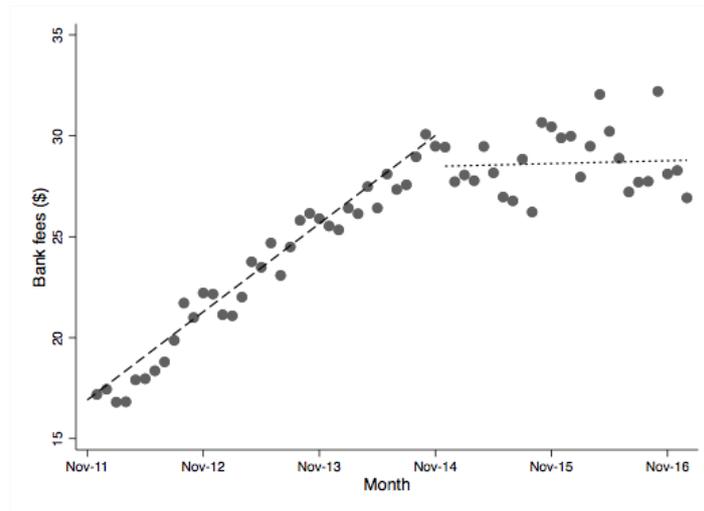


Figure 2: Bank fees and penalty payments around the app introduction. Each raw data dot represents the average amount of financial fees (NSF fees, late fees, and overdraft interest) paid by all individuals in any given month. The lines are simple linear fits through the data points before and after the app introduction.

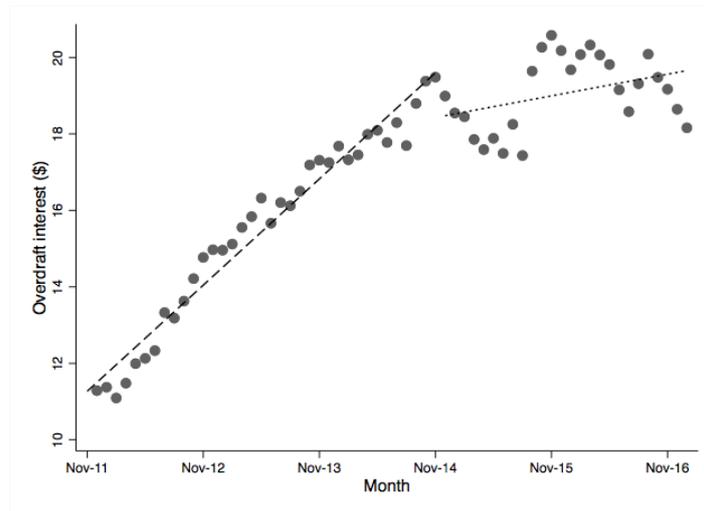


Figure 3: Overdraft interest around the app introduction. Each raw data dot represents the average amount of overdraft interest paid by all individuals in any given month. The lines are simple linear fits through the data points before and after the app introduction.

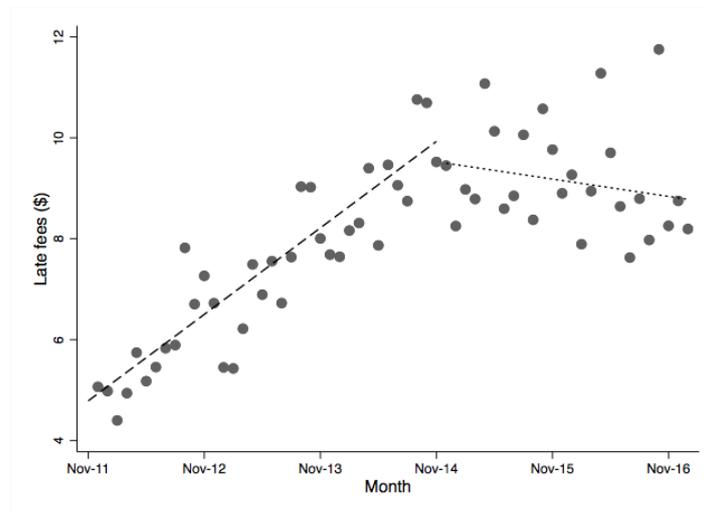


Figure 4: Late fees around the app introduction. Each raw data dot represents the average amount of late fees paid by all individuals in any given month. The lines are simple linear fits through the data points before and after the app introduction.

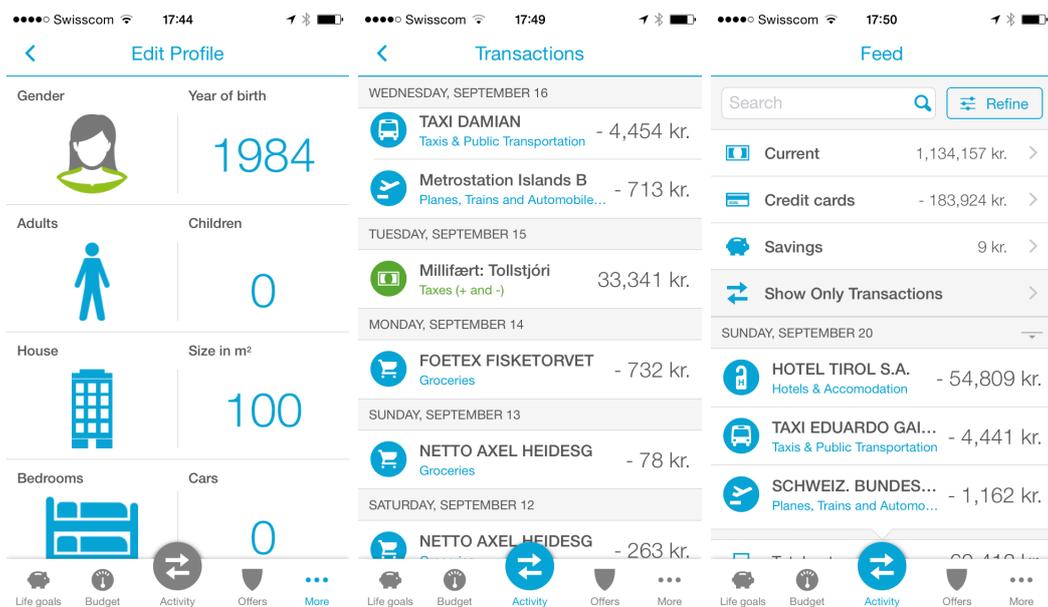


Figure 5: The financial aggregation app: screenshots of home screens.

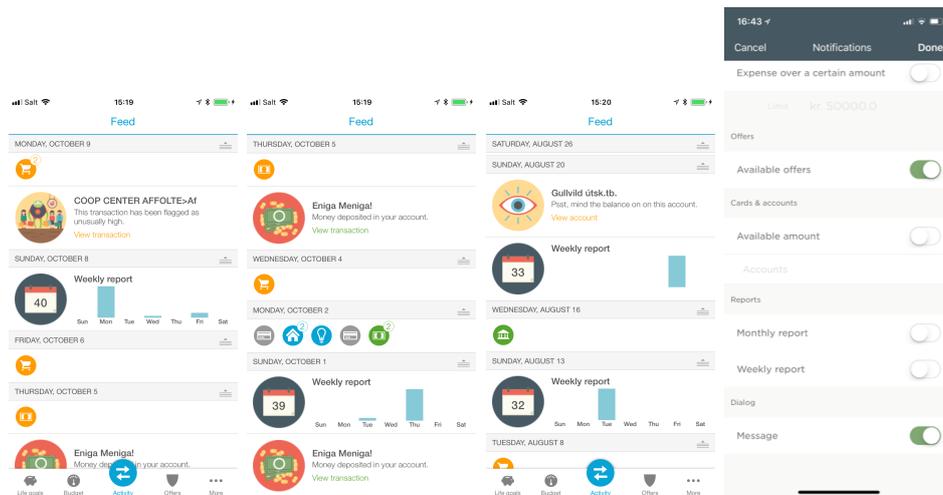


Figure 6: The financial aggregation app: screenshots of financial feed displaying messages next to transactions and the default settings for messages. The app does not send push notifications and individuals have to log in to see these messages.

Table 1: Demographic statistics

Panel A	Mean	Standard Deviation	Statistics Iceland
Age	40.6	11.5	37.2
Female	0.49	0.50	0.48
Unemployed	0.08	0.27	0.06
Parent	0.23	0.42	0.33
Pensioner	0.15	0.36	0.12
Panel B	Years	Sample Count	
Baby Boomer	1946-1964	2,974	
Generation X	1965-1980	6,239	
Millennial	1981-2000	4,328	

Notes: The three generational categories are based on when individuals were born, Baby Boomers (1946-1964), Generation X'ers (1965-1980), and Millennials (1981-2000).

Table 2: Financial fees and credit card expenditure shares for non-adopters and adopters

	3 months			6 months			12 months			18 months		
	no login	login	$\Delta$	no login	login	$\Delta$	no login	login	$\Delta$	no login	login	$\Delta$
Total financial fees	29.9 (112.4)	24.1 (56.8)	-5.9	29.5 (106.7)	23.5 (53.6)	-6.1	28.7 (90.8)	23.5 (56.9)	-5.2	28.5 (84.5)	24.1 (62.0)	-4.4
Credit card interest	0.3 (3.0)	0.2 (1.9)	-0.1	0.3 (3.1)	0.2 (1.8)	-0.1	0.3 (3.0)	0.2 (1.8)	-0.1	0.3 (2.9)	0.2 (1.9)	-0.1
NSF fees	0.2 (2.1)	0.2 (1.9)	-0.0	0.2 (2.1)	0.2 (1.9)	-0.0	0.2 (2.2)	0.2 (1.8)	-0.1	0.2 (2.3)	0.2 (1.8)	-0.1
Late fees	10.1 (90.3)	7.0 (38.1)	-3.0	10.1 (86.5)	6.9 (34.4)	-3.2	9.6 (70.6)	6.8 (38.3)	-2.8	9.3 (63.9)	6.9 (44.0)	-2.4
Overdraft interest <sup>a</sup>	19.3 (54.9)	16.6 (37.6)	-2.7	18.9 (51.7)	16.2 (36.6)	-2.7	18.6 (48.8)	16.4 (38.0)	-2.2	18.5 (47.9)	16.7 (39.9)	-1.8
Credit card expenditure share	0.45 (0.39)	0.56 (0.38)	0.11	0.45 (0.39)	0.55 (0.38)	0.10	0.46 (0.39)	0.56 (0.38)	0.10	0.46 (0.39)	0.56 (0.38)	0.10

Notes: All numbers are in US dollars. Standard deviations are displayed below mean averages. Financial fees and credit card expenditure shares of non-adopters and adopters per month for 3, 6, 12, or 18 months after the app introduction. Raw data averages per individual per month.

<sup>a</sup> This is the average for all individuals in the group, i.e., not conditional on having overdrafts.

Table 3: Financial fees and standing for non-adopters and adopters

	Non-adopters	Adopters
Age	42.7 (12.5)	37.8 (11.2)
Female	0.50	0.46
Total income	4,273 (5,821)	4,353 (48,539)
Regular income	4,110 (5,499)	3,783 (5,154)
Irregular income	163 (1,760)	569 (48,196)
Total spending	1,543 (1,630)	1,438 (1,683)
Current account balance	2,006 (9,713)	1,738 (6,554)
Savings account balance	3,623 (22,451)	4,289 (35,587)
Cash	5,629 (26,001)	6,027 (36,443)
Liquidity	10,697 (25,647)	11,169 (36,690)
Overdraft amount (conditional)	-5,167 (9,124)	-4,698 (10,856)
Overdraft amount (unconditional)	-1,637 (5,745)	-1,356 (6,303)
Credit card balance	-1,665 (1,972)	-1,580 (1,970)
Current account limit	2,765 (6,665)	2,484 (11,902)
Credit card limit	4,414 (4,838)	4,715 (6,165)
Credit utilization	0.43 (0.30)	0.42 (0.31)
Total bank fees	26 (75)	21 (79)
Overdraft interest (conditional)	50 (70)	46 (61)
Overdraft interest (unconditional)	17 (48)	13 (41)
# individuals	7,492	5,391

Notes: The table shows the average financial fees and standing of individual adopters and non-adopters before the app introduction, i.e., our final sample of individuals for which we observe complete records the 2 years before and after the app introduction. All numbers are in USD. Overdraft amounts and interest expenses are reported both with and without conditioning on having overdraft debt. Standard deviations are displayed below mean averages.

Table 4: Income and consumption statistics

	Mean	Standard Deviation	Statistics Iceland
Monthly regular income	3,038	3,184	3,227
Monthly salary	2,704	2,993	2,456
Monthly spending:			
Total	1,315	1,224	
Groceries	468	389	490
Fuel	236	259	(359)
Alcohol	62	121	85
Ready Made Food	170	1723	(252)
Home Improvement	150	465	(229)
Transportations	58	700	66
Clothing and Accessories	87	181	96
Sports and Activities	44	148	(36)
Pharmacies	40	62	42

Notes: The table shows the consumption of income of all active users that we observe starting at some point before or after the app introduction. All numbers are in US dollars. Parentheses indicate that data categories do not match perfectly. Raw data averages per individual and per month.

Table 5: Login statistics

	Logins Oct 2014	Logins Nov 2014	App Logins Nov 2014	% Pop logins Nov 2014	Freq app use by Aug 2016
Total	12,120	21,245	11,477	20%	41%
Men	7,131	13,901	7,510	24%	43%
Women	4,989	7,344	3,967	17%	39%
Baby Boomers	2,346	3,061	855	18%	27%
Generation Xers	6,435	11,064	6,621	21%	41%
Millennials	3,020	6,631	3,939	20%	52%

Note: Total logins before and after the app introduction.

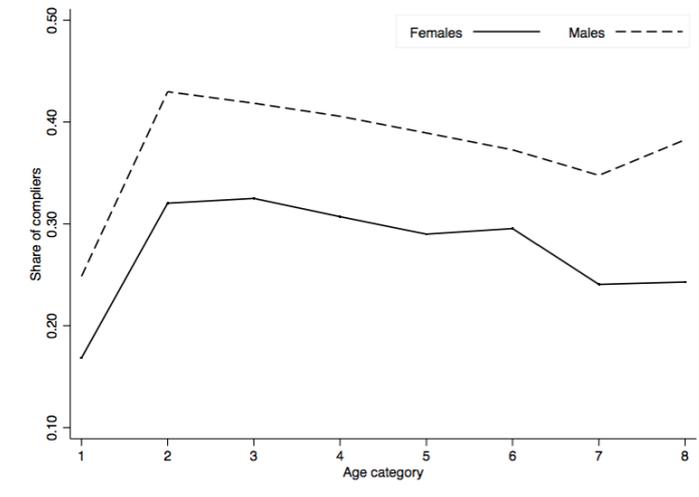


Figure 7: Share of adopters by gender and age group. Age group 1, if age  $\leq 25$ ; 2 if  $25 < \text{age} \leq 30$ ; 3 if  $30 < \text{age} \leq 35$ ; 4 if  $35 < \text{age} \leq 40$ ; 5 if  $40 < \text{age} \leq 45$ ; 6 if  $45 < \text{age} \leq 50$ ; 7 if  $50 < \text{age} \leq 60$ ; 8 if  $60 < \text{age}$ . Each raw data point represents the fraction of individuals in each age group who logged in via the app at least once over the sample period.

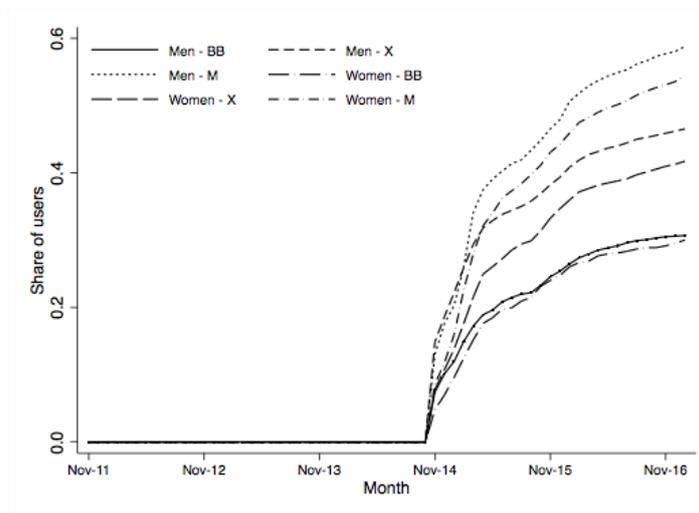


Figure 8: Uptake of adopters around the app introduction. Each raw data point represents the fraction of individuals in each age group who logged in via the app at least once up until each month. Each line represents one generation and gender group.

Table 6: The effect of logins on financial fees

	(1)	(2)	(3)
	First Stage	ITT	IV
<i>Total bank fees:</i>			
Total Logins	0.8078*** (0.0270)	-181.1*** (37.3)	-224.1*** (46.7)
$I(\text{Logins}_{it} > 0)$	0.0923*** (0.0017)	-181.1*** (37.3)	-1,962.2*** (405.5)
<i>#Observations</i>	643,728	643,728	643,728
<i>#Individuals</i>	13,411	13,411	13,411
<i>Overdraft interest:</i>			
Total Logins	0.8078*** (0.0270)	-142.0*** (18.5)	-176.8*** (23.7)
$I(\text{Logins}_{it} > 0)$	0.0932*** (0.0017)	-142.0*** (18.5)	-1,547.8*** (202.9)
<i>#Observations</i>	643,728	643,728	643,728
<i>#Individuals</i>	13,411	13,411	13,411
<i>Late fees:</i>			
Total Logins	0.8078*** (0.0270)	-42.9 (31.2)	-53.2 (38.7)
$I(\text{Logins}_{it} > 0)$	0.0932*** (0.0017)	-42.9 (31.2)	-465.4 (338.5)
<i>#Observations</i>	643,728	643,728	643,728
<i>#Individuals</i>	13,411	13,411	13,411

Notes: Standard errors are clustered at the individual level and are within parentheses. Each entry is separate regression and presents the estimated effect on financial fees as a result of the mobile app introduction using a 24-month symmetric window. Column (1) shows the estimate for coefficient  $\lambda$  in Equation (2), the jump in logins at the mobile app introduction. Column (2) shows the estimate for coefficient  $\pi$  in Equation (3), the intention-to-treat effect of the mobile app introduction on financial fee payments. Column (3) shows the 2SLS IV estimate for coefficient  $\beta$  in Equation (1), the causal LATE effect of the mobile app introduction. We either use the total number of logins as the variable  $L_i$  in Equations (1) and (2) or an indicator variable for logging in at least once per month after the app introduction  $I(\text{Logins}_{it} > 0)$ . All specifications include linear controls of time since the app introduction where we allow the slopes on each side to differ. We also include month-of-year fixed effects and individual fixed effects in all specifications.

Estimates are reported in ISK, Estimates are reported in USD to obtain the USD estimates, the coefficients can simply be divided by 100. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 7: Financial penalties around the app introduction

	October 2014	December 2014	$\Delta$
<i>Total bank fees</i>			
Men	34.90 (84.35)	32.42 (73.67)	-7.1%
Women	29.00 (63.58)	27.46 (68.89)	-5.3%
<i>Overdraft interest</i>			
Men	23.39 (64.14)	22.47 (57.84)	-3.9%
Women	18.59 (46.56)	18.53 (51.49)	-0.3%
<i>Late fees</i>			
Men	10.88 (49.78)	9.40 (39.25)	-13.6%
Women	9.78 (36.59)	8.44 (37.78)	-13.7%

Note: All numbers are in USD.

Table 8: The effects of logins on financial fees

	Local Linear Method			Global Polynomial Method		
	(1)	(2)	(3)	(4)	(5)	(6)
Total logins	-244.2*** (48.7)	-233.0*** (57.4)	-284.2** (128.9)	-208.9*** (57.5)	-255.9*** (94.0)	-282.9** (132.4)
$I(\text{Logins}_{it} > 0)$	-2,368.4*** (468.1)	-2,270.2*** (554.8)	-3,853.1** (1,728.3)	-2,261.5*** (618.5)	-2,964.8*** (1,078.7)	-3,165.7** (1,463.1)
Bandwidth	18	12	6	24	24	24
Polynomial order:				Second	Third	Fourth
<i>#Observations</i>	482,796	321,864	160,932	643,728	643,728	643,728
<i>#Individuals</i>	13,411	13,411	13,411	13,411	13,411	13,411

Notes: Standard errors are clustered at the individual level and are within parentheses. Each entry is separate regression and presents the estimated effect on financial fees as a result of the mobile app introduction. Columns 1-3 provide estimates using local linear regressions. Columns 4-6 present estimates using global polynomials using a 2<sup>nd</sup>, 3<sup>rd</sup>, and a 4<sup>th</sup> order polynomial function of time from the mobile app introduction using a 24-month symmetric window. The estimates are for coefficient  $\beta$  in Equation (1), the causal LATE effect of the mobile app introduction, using the total number of logins as the variable  $L_i$  in Equation (1). The specifications in columns (1) to (3) include linear controls of time since the app introduction where we allow the slopes on each side to differ. The specifications in columns (4) to (6) include polynomial controls of time since the app introduction where we allow the coefficient on each side to differ. We also include month-of-year fixed effects and individual fixed effects in all specifications. Estimates are reported in ISK, to obtain the USD estimates, the coefficients can simply be divided by 100.

\*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 9: The impact of logins on the share of expenditures paid by credit cards

	(1)	(2)	(3)
	First Stage	ITT	IV
Total Logins	0.8199*** (0.0278)	0.0087*** (0.0012)	0.0106*** (0.0014)
$I(\text{Logins}_{it} > 0)$	0.0953*** (0.0017)	0.0087*** (0.0012)	0.0916*** (0.0121)
<i>#Observations</i>	611,953	611,953	611,953
<i>#Individuals</i>	13,411	13,411	13,411

Notes: Standard errors are clustered at the individual level and are within parentheses. Each entry is separate regression and presents the estimated discontinuity in the share of expenses paid by credit cards as a result of the mobile app introduction using a 24-month symmetric window. Column (1) shows the estimate for coefficient  $\lambda$  in Equation (2), the jump in logins at the mobile app introduction. Column (2) shows the estimate for coefficient  $\pi$  in Equation (3) with the variable  $Y_i$  given by the share of expenditures paid by credit cards, the intention-to-treat effect of the mobile app introduction on financial fee payments. Column (3) shows the 2SLS IV estimate for coefficient  $\beta$  in Equation (1) with the variable  $Y_i$  given by the share of expenditures paid by credit cards, the causal LATE effect of the mobile app introduction. We either use the total number of logins as the variable  $L_i$  in Equations (1) and (2) or an indicator variable for logging in at least once per month after the app introduction  $I(\text{Logins}_{it} > 0)$ . All specifications include linear controls of time since the app introduction where we allow the slopes on each side to differ. We also include controls for total expenditure, month-of-year fixed effects, and individual fixed effects in all specifications.

\*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 10: The effects of the number of monthly logins on the share of expenditure paid by credit cards

	Local Linear Method			Global Polynomial Method		
	(1)	(2)	(3)	(4)	(5)	(6)
Total logins	0.0118*** (0.0015)	0.0124*** (0.0017)	0.0099*** (0.0031)	0.0116*** (0.0020)	0.0169*** (0.0033)	0.0018 (0.0043)
$I(\text{Logins}_{it} > 0)$	0.1128*** (0.0141)	0.1194*** (0.0154)	0.1296*** (0.0396)	0.1264*** (0.0211)	0.1928*** (0.0365)	0.0201 (0.0478)
Bandwidth	18	12	6	24	24	24
Polynomial order:				Second	Third	Fourth
<i>#Observations.</i>	465,683	314,102	158,481	611,953	611,953	611,953
<i>#Individuals</i>	13,410	13,408	13,407	13,411	13,411	13,411

Notes: Standard errors are clustered at the individual level and are within parentheses. Each entry is separate regression and presents the estimated effect on financial fees as a result of the mobile app introduction. Columns 1-3 provide estimates using local linear regressions. Columns 4-6 present estimates using global polynomials using a 2<sup>nd</sup>, 3<sup>rd</sup>, and a 4<sup>th</sup> order polynomial function of time from the mobile app introduction using a 24-month symmetric window. The estimates are for coefficient  $\beta$  in Equation (1) with the variable  $Y_i$  given by the share of expenditures paid by credit cards, the causal LATE effect of the mobile app introduction, using the total number of logins as the variable  $L_i$  in Equation (1). The local linear specifications include linear controls of time since the app introduction where we allow the slopes on each side to differ. We also allow the curvature of the global polynomials on each side to be different. We also include month-of-year fixed effects and individual fixed effects in all specifications. Estimates are reported in ISK, to obtain the USD estimates, the coefficients can simply be divided by 100. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

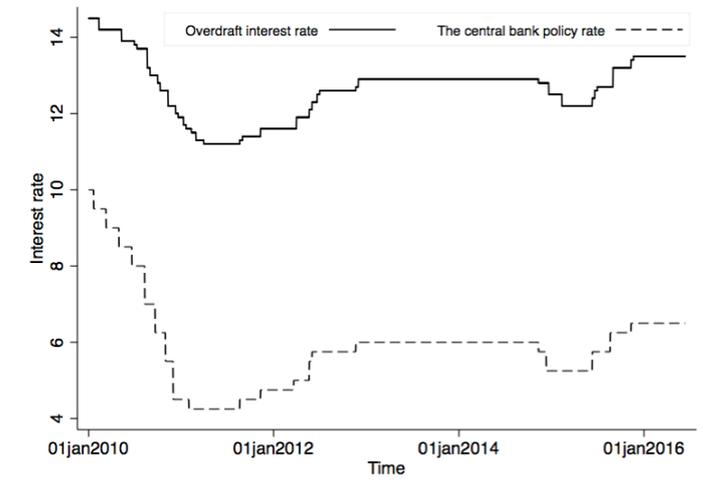


Figure 9: Trends of the central bank policy rate and overdraft interest rate through the app introduction. Data source: Central Bank of Iceland <https://www.cb.is/>

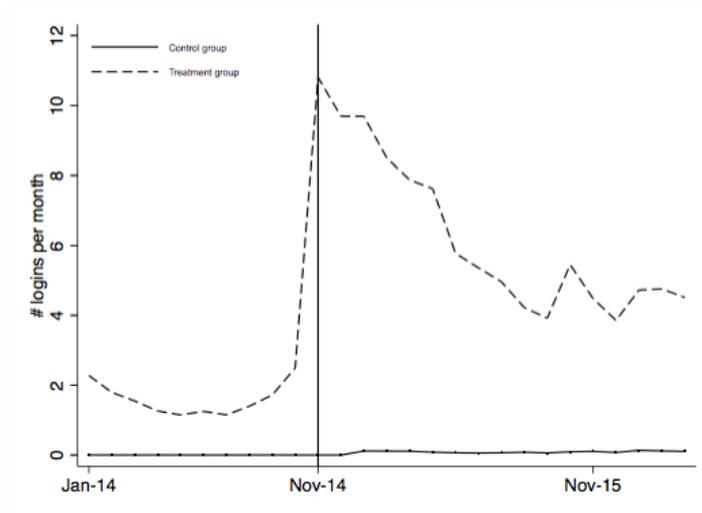


Figure 10: Logins by adopters after the app introduction versus inactive users.

Table 11: The impact of logins on financial fees - Difference-in-differences estimation

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Total bank fees:</i>						
$\gamma$	-468.2*** (142.6)	-468.2*** (142.6)	-506.9*** (147.1)	-506.0*** (147.2)	-506.0*** (147.2)	-506.0*** (147.2)
<i>Overdraft interest:</i>						
$\gamma$	55.0 (122.1)	55.0 (122.1)	-45.7 (129.1)	-44.8 (129.2)	-44.8 (129.2)	-44.7 (129.2)
<i>Late fees:</i>						
$\gamma$	-238.0*** (66.8)	-238.0*** (66.8)	-269.1*** (73.2)	-268.6*** (73.2)	-268.6*** (73.2)	-268.6*** (73.2)
Polynomial order		first		first	second	third
Income			✓	✓	✓	✓
Gender			✓	✓	✓	✓
Age and age squared			✓	✓	✓	✓
<i>#Observations</i>	336,042	336,042	287,595	287,595	287,595	287,595
<i>#Individuals</i>	5,334	5,334	5,334	5,334	5,334	5,334

Notes: Standard errors are clustered at the individual level and are within parentheses. Each entry is separate regression and presents the estimated effect of the mobile app introduction using a difference-in-differences approach, i.e., the coefficient  $\gamma$  in Equation (4) represents the effect of the mobile app introduction on financial fee payments. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

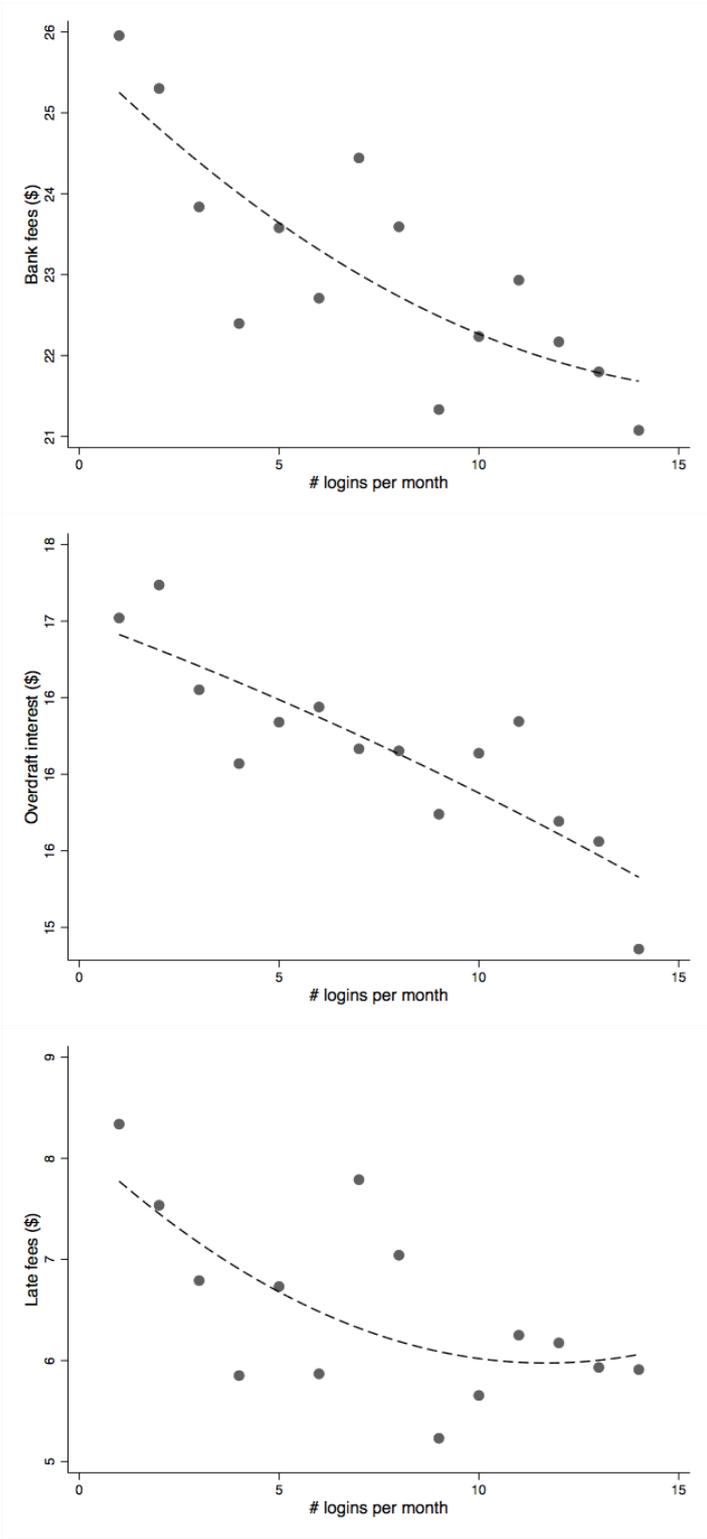


Figure 11: Monthly financial fee payments by bins of monthly logins. Each raw data dot represents the average amount of fees paid by all individuals given their average monthly login frequency. The lines are simple two-way fits through the data points.

# A Factiva search results

8/14/2018

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1. **Interview: FTA offers multiple opportunities for Iceland, China**  
Xinhua News Agency, 8:42 AM, 1 November 2014, 1541 words, Svava Jónsdóttir, (English)  
REYKJAVIK, Nov. 1 (Xinhua) -- The Free Trade Agreement (FTA) between China and Iceland has become one of the topics at the current Arctic Circle Assembly here for bringing Ar  
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2. **14Nov/Már Guðmundsson: Economic outlook, monetary policy, and credit ratings**  
ForeignAffairs.co.nz, 14 November 2014, 2895 words, (English)  
The Iceland Chamber of Commerce has a long-standing tradition of holding a meeting like this one on economic developments and prospects and monetary policy. The meeting is he  
and, in later years...  
(Document PRRALL0020141115eab6000ek)

3. **Icelandic inflation falls to 16-year low in November, increases probability of further interest rate cuts**  
BIS Global Insight Daily Analysis, 28 November 2014, 487 words, Diego Iscaro, (English)  
Iceland's consumer price index rose by just 1.0% year on year (y/y) in November, according to figures released by Statistics Iceland. This is the lowest increase since October 1998.  
(Document W DAN0002014112eabq0001g)

4. **Central Bank of Iceland cuts interest rates in line with improved inflation outlook**  
BIS Global Insight Daily Analysis, 5 November 2014, 851 words, Diego Iscaro, (English)  
The Central Bank of Iceland surprised markets by cutting interest rates for the first time since early 2011. Following its November meeting, the Monetary Policy Committee (MPC) of 8  
points.  
(Document W DAN00020141105eab500020)

5. **Iceland economy predicted to grow by 2.7% in 2014**  
PNA (Philippines News Agency), 14 November 2014, 225 words, (English)  
news release Nov 14 - Iceland's economic growth is expected to reach 2.7 percent in 2014, according to latest economic forecast released Friday by Statistics Iceland

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1/1

### Interview: FTA offers multiple opportunities for Iceland , China

[Xinhua News Agency](#), 08:42 AM, 1 November 2014, 1541 words, Svava Jonsdottir, (English)

by Svava Jonsdottir REYKJAVIK, Nov. 1 (Xinhua) -- The Free Trade Agreement (FTA) between China and Iceland has become one of the topics at the current Arctic Circle Assembly here for bringing Arctic opportunities.

(Document XNEWS00020141101eab10063h)

### 14Nov/Már Guðmundsson: Economic outlook, monetary policy, and credit ratings

[ForeignAffairs.co.nz](#), 14 November 2014, 2695 words, (English)

MIL OSI - Source: Bank for International Settlements - Press Release/Statement Headline: 14Nov/Már Guðmundsson: Economic outlook, monetary policy, and credit ratings

(Document PARALL0020141115eabe000ek)

### Iceland Cuts Interest Rates

[WSJ Blogs](#), 06:50 AM, 5 November 2014, 342 words, [Charles Duxbury](#), [Anna L. Molin](#), By Charles Duxbury and Anna Molin, (English)

Iceland became the latest country to join the international struggle against low inflation Wednesday, cutting interest rates for the first time in two years to boost the rate of price increases in the North Atlantic island state.

(Document WCWSJB0020141105eab5003e9)

### Icelandic inflation falls to 16-year low in November, increases probability of further interest rate cuts

[IHS Global Insight Daily Analysis](#), 26 November 2014, 487 words, Diego Iscarro, (English)

A marked moderation in inflation suggests that the Icelandic central bank may now act sooner than previously expected to cut interest rates. Click through for more analysis and data.

(Document WDAN000020141126eabq0001g)

### Central Bank of Iceland cuts interest rates in line with improved inflation outlook

[IHS Global Insight Daily Analysis](#), 5 November 2014, 851 words, Diego Iscarro, (English)

The Central Bank surprised markets with its first interest rate cut since the start of 2011. IHS perspective Significance The Central Bank of Iceland surprised markets by cutting interest rates for the first time since early 2011. Following ...

(Document WDAN000020141105eab500020)

### Iceland economy predicted to grow by 2.7% in 2014

[PNA \(Philippines News Agency\)](#), 14 November 2014, 225 words, (English)

REYKJAVIK, Nov. 14 -- Iceland's economy was predicted to grow by 2.7 percent in 2014, according to latest economic forecast released Friday by Statistics Iceland.

(Document PHILNA0020141115eabe000dk)

### Federal Council adopts dispatches on double taxation agreements with Estonia, Ghana, Iceland , Uzbekistan and Cyprus

[ForeignAffairs.co.nz](#), 12 November 2014, 184 words, (English)

MIL OSI - Source: Switzerland - Department of Finance - Press Release/Statement: Headline: Federal Council adopts dispatches on double taxation agreements with Estonia, Ghana, Iceland, Uzbekistan and Cyprus

(Document PARALL0020141113eabc000gz)

### Iceland eager to reach free trade agreement with Japan

[Kyodo News](#), 05:00 AM, 11 November 2014, 308 words, Mie Sakamoto Mie Sakamoto, (English)

TOKYO, Nov. 11 -- Icelandic Foreign Minister Gunnar Sveinsson said Tuesday the Nordic country is eager to reach a free trade agreement with Japan to seek further economic growth, calling on Tokyo to "take some new steps."

(Document KYODO00020141111eabb0053d)

### Iceland central bank cuts key rate 0.25 pct pt to 5.75%

8/15/2018

Factiva

[24 Ore Radiocor-Newswire International Edition](#), 05:57 AM, 5 November 2014, 174 words, (English)

Inflation rate well below target (Il Sole 24 Ore Radiocor) - Reykjavik , 05 Nov - Iceland's central bank today cut its main interest rate 0.25 percentage points, as it seeks to stave off excessively low inflation.  
(Document SOLRADIN20141105eab5001uq)

### Iceland extends deadline for Landsbanki bonds rescheduling

[Reuters News](#), 06:19 AM, 18 November 2014, 246 words, (English)

REYKJAVIK, Nov 18 (Reuters) - Iceland has agreed with Landsbankinn, the successor of one of three banks that amassed huge debts before collapsing and crashing the economy in 2008, to extend a deadline until the end of the year to ...  
(Document LBA000020141118eabi00aar)

### Australian FTA just the beginning

[China Daily-Europe Weekly](#), 21 November 2014, 727 words, Nie Pingxiang, (English)

Landmark deal shows China's willingness to compromise and open the country up to foreign competition On Nov 17, China and Australia announced they had formally completed negotiations on a free trade agreement. They are likely to sign and ...  
(Document CDEUWE0020141121eabl0000b)

### Iceland Inflation Eases In November

[RTT News](#), 26 November 2014, 112 words, (English)

(RTTNews) - Iceland's consumer price inflation slowed in November after accelerating slightly in the previous month, figures from Statistics Iceland showed Wednesday.  
(Document RTTNEW0020141126eabq003ux)

### Iceland Central Bank Cuts Rates Unexpectedly

[RTT News](#), 5 November 2014, 248 words, (English)

(RTTNews) - Iceland's central bank lowered its key rate for the first time since February 2011 as growth is set to be weaker than the previous forecast.  
(Document RTTNEW0020141105eab5003v1)

### Iceland 's unemployment rate at 5 percent in October

[Middle East North Africa Financial Network \(MENAFN\)](#), 27 November 2014, 96 words, (English)

(MENAFN) According to a data by Statistics Iceland, the country's unemployment rate stood at 5 percent in October, showing a slight change over a year earlier, Xinhua reported.  
(Document MENAFI0020141127eabr0008t)

### Iceland 's CPI down 0.52 pct between months of October, November

[Xinhua News Agency](#), 09:26 AM, 26 November 2014, 166 words, xiebinbin, (English)

REYKJAVIK, Nov. 26 (Xinhua) -- Iceland's Consumer Price Index (CPI) based on prices reported month-on-month experienced a decrease of 0.52 percent as of middle of November, according to statistics issued on Wednesday by Statistics Iceland. ...  
(Document XNEWS00020141126eabq00899)

### UPDATE 1- Iceland 's central bank cuts interest rate as inflation falls

[Reuters News](#), 05:13 AM, 5 November 2014, 247 words, (English)

(Adds reason for cut) COPENHAGEN, Nov 5 (Reuters) - Iceland's central bank lowered its key interest rate, which has been unchanged for two years, to 5.75 percent from 6.00 percent, saying that real borrowing costs had risen more than ...  
(Document LBA000020141105eab500ayd)

### Cyprus and Iceland sign Double Taxation Agreement

[Cyprus News Agency](#), 14 November 2014, 109 words, (English)

The Republic of Cyprus and the government of Iceland signed on Thursday a Double Taxation Avoidance Agreement concerning income. The Finance Ministry issued on Friday an announcement, saying that the agreement contributes in further ...  
(Document CYPRNA0020141203eabe0002i)

### \* Iceland Central Bank Cut Main Interest Rate by 25 Bps to 5.75%

[Dow Jones Institutional News](#), 03:56 AM, 5 November 2014, 208 words, (English)

5 Nov 2014 04:24 ET Iceland's Central Bank Cuts Main Interest Rate by 25 Bps to 5.75% By Anna Molin Iceland's central bank on Wednesday cut its main interest rate for the first time in two years in an effort to boost inflation, which is ...  
(Document DJDN000020141105eab5001gv)

### Iceland 's unemployment stood at 5 % in October

[PNA \(Philippines News Agency\)](#), 27 November 2014, 182 words, (English)

REYKJAVIK, Nov. 27 -- Iceland's unemployment rate stood at 5 percent in October 2014, little change compared with the same period last year, according to a labor force survey issued Wednesday by Statistics Iceland.  
(Document PHILNA0020141127eabr0005e)

### Iceland CPI +1.0 pct yr/yr in Nov

[Reuters News](#), 04:16 AM, 26 November 2014, 87 words, (English)

COPENHAGEN, Nov 26 (Reuters) - Icelandic consumer prices fell 0.5 percent in November from October while annual inflation rose 1.0 percent, the country's statistics office said on Wednesday.  
(Document LBA0000020141126eabq008vm)

### TABLE-Euro zone Q3 GDP growth stronger than expected

[Reuters News](#), 05:00 AM, 14 November 2014, 726 words, (English)

BRUSSELS, Nov 14 (Reuters) - The European Union's statistics office Eurostat released the following data on gross domestic product growth in the euro zone in the third quarter of 2014. Economist polled by Reuters had expected ...  
(Document LBA0000020141114eabe008y5)

### Iceland central bank cuts key rate 0.25 pct pt to 5.75% -2-

[24 Ore Radiocor-NewsWire International Edition](#), 06:04 AM, 5 November 2014, 100 words, (English)

Future rate moves could hinge on pay increases (Il Sole 24 Ore Radiocor) - Reykjavik , 05 Nov - The central bank indicated that future rate moves could depend on the impact of pay increases.  
(Document SOLRADIN20141105eab500209)

### Corporate taxes: Double-tax treaties

[Economist Intelligence Unit - Country Commerce](#), 1 November 2014, 1381 words, (English)

Switzerland has treaties in force with 85 countries (see table below). In addition, it has initiated or signed new treaties with Cyprus, Costa Rica, North Korea, Oman, the United Arab Emirates and Zimbabwe. These treaties provide for ...  
(Document EIUC000020141206eab100016)

### China's trade with Iceland in September 2014

[Xinhua's China Economic Information Service](#), 02:12 AM, 7 November 2014, 254 words, 新闻字, (English)

BEIJING, Nov. 7 (Xinhua) -- Following is a table showing the total value of China's trade with Iceland from 2004 to September 2014, released by the General Administration of Customs: (Unit: 1,000 U.S. dollars)  
(Document XNHA000020141107eab70020p)

### ACEA: Romania, 2nd place in EU in terms of increase in number of new car registrations, in October

[AGERPRES](#), 04:57 AM, 18 November 2014, 332 words, (English)

Brussels, Nov 18 /Agerpres/ - Car sales in the European Union and EFTA countries recorded, in October, the 14th consecutive month of growth as the recovery of the Eurozone's economy encouraged consumers to purchase new models, according to ...  
(Document ROMPES0020141118eabi0012x)

### Central Bank of Iceland -Statement of the Monetary Policy Committee

[ENP Newswire](#), 6 November 2014, 379 words, (English)

Release date - 05112014 The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to lower the Bank's interest rates by 0.25 percentage points.  
(Document ENPNEW0020141106eab6000i5)

### Iceland central bank cuts rate

[Global Banking News](#), 5 November 2014, 100 words, (English)

Iceland's central bank has cut its rate. On Wednesday, the bank cut its main interest rate for the first time in two years to boost inflation. The apex bank said its benchmark seven-day collateralised lending rate would be lowered to 5.75 ...  
(Document GLOBAN0020141105eab50002w)

### Macro Horizons: GOP's Midterm Win In Focus, But Global Economy Bigger Concern

[WSJ Blogs](#), 07:43 AM, 5 November 2014, 1538 words, [Michael J. Casey](#), [Alen Mattich](#), By Michael J. Casey and Alen Mattich, (English)

Macro Horizons covers the main macroeconomic and policy news events affecting foreign-exchange, fixed income and equity markets around the world, as selected by editors in New York, London and Hong Kong.  
(Document WCWSJB0020141105eab5003xp)

### Europa-Euro area unemployment rate at 11.5%

[ENP Newswire](#), 3 November 2014, 2813 words, (English)

Release date - 31102014 The euro area1 (EA18) seasonally-adjusted2 unemployment rate3 was 11.5% in September 2014, stable compared with August 20144, but down from 12.0% in September 2013.  
(Document ENPNEW0020141103eab3000ad)

### Switzerland: Tax regulations

[Economist Intelligence Unit - ViewsWire](#), 28 November 2014, 4676 words, (English)

Corporate taxes: Overview Switzerland is noted for its moderate taxation of companies. It remains at the lower end of the corporate tax burden among the wealthier countries of OECD. The complexity of the Swiss system is partly due to the ...  
(Document EIUCP0020141206eab500006)

### Selling Alberta's economy through cultural diplomacy

[The Globe and Mail](#), 7 November 2014, 754 words, By TODD HIRSCH, (English)

Todd Hirsch is the Calgary-based chief economist of ATB Financial and author of The Boiling Frog Dilemma: Saving Canada from Economic Decline.  
(Document GLOB000020141107eab70001w)

### Landsbankinn hf.: Financial Results January - September 2014

[NASDAQ OMX Nordic Exchanges - Company Notices](#), 11:11 AM, 6 November 2014, 1588 words, (English)

Landsbankinn reports an ISK 20 bn profit in the first 9M of 2014 In the first nine months of 2014, Landsbankinn's after-tax profit was ISK 20 bn as compared with ISK 22 bn for the same period in 2013. This lower margin is due mostly to ...  
(Document NASDQC0020141106eab6003h1)

### EU Demands Clear Economic Strategy From Ukraine

[Dow Jones Institutional News](#), 02:10 PM, 14 November 2014, 713 words, By Laurence Norman, (English)

BRUSSELS--The European Union won't organize a donors' conference until Ukraine's government lays out a clear new economic strategy, the bloc's new enlargement chief said Friday.  
(Document DJDN000020141114eabe003u8)

### DIARY - Major Central Bank Meetings for 2014-15

[Reuters News](#), 04:37 AM, 14 November 2014, 1644 words, (English)

For other related diaries, please see: DIARY - U.S. Federal Reserve DIARY - Polling Unit Diary DIARY - Key World Financial Events DIARY - Political and General news DIARY - Index of all ...  
(Document LBA0000020141114eabe008xc)

### Political/commercial background: Foreign investment

[Economist Intelligence Unit - Country Commerce](#), 1 November 2014, 1206 words, (English)

Switzerland welcomes foreign direct investment (FDI) in manufacturing, services, and research and development, and it treats foreign enterprises in the same way as local companies. Switzerland Global Enterprise (S-GE; previously known as ...  
(Document EIUC000020141206eab100008)

### DIARY - Major Central Bank Meetings for 2014-15

[Reuters News](#), 08:36 AM, 21 November 2014, 1740 words, (English)

For other related diaries, please see: DIARY - U.S. Federal Reserve DIARY - Polling Unit Diary DIARY - Key World Financial Events DIARY - Political and General news DIARY - Index of all ...  
(Document LBA0000020141121eabl00e13)

### USA: 5-year forecast table

[Economist Intelligence Unit - ViewsWire](#), 17 November 2014, 4201 words, (English)

Data summary: Global outlook Global outlook 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 International assumptions (%) World GDP growth 4.0 2.6 2.0 2.1 2.3 2.9 2.8 2.9 ...

(Document EIUCP00020141119eabh0000h)

### Good Morning Ms. Yellen, Rand Paul on Line One

[Dow Jones Top North American Equities Stories](#), 01:09 PM, 5 November 2014, 2019 words, (English)

The Wall Street Journal's Daily Report on Global Central Banks for Wednesday, November 5, 2014: Sign up for the newsletter: <http://on.wsj.com/grandcentralsignup>.

(Document DJTNAE1120141105eab5000ct)

### Macro Horizons: GOP's Midterm Win In Focus, But Global Economy Bigger Concern

[Dow Jones Institutional News](#), 07:36 AM, 5 November 2014, 1550 words, (English)

By Michael J. Casey and Alen Mattich Macro Horizons covers the main macroeconomic and policy news events affecting foreign-exchange, fixed income and equity markets around the world, as selected by editors in New York, London and Hong Kong.

(Document DJDN000020141105eab500271)

### Political/commercial background: International agreements

[Economist Intelligence Unit - Country Commerce](#), 1 November 2014, 1838 words, (English)

Switzerland is a member of the Council of Europe, the IMF, the OECD, the Organisation for Security and Co-operation in Europe, the World Bank and the World Trade Organisation (WTO). In May 2009 Switzerland became a member of the ...

(Document EIUC00020141206eab10000a)

### Good Morning Ms. Yellen, Rand Paul on Line One

[Dow Jones Top Global Market Stories](#), 12:29 PM, 5 November 2014, 2019 words, (English)

The Wall Street Journal's Daily Report on Global Central Banks for Wednesday, November 5, 2014: Sign up for the newsletter: <http://on.wsj.com/grandcentralsignup>.

(Document DJTGMS1120141105eab5000bs)

### AgriNews Kiev (No. of pages: 23)

[AgriNews, Kiev](#), 10 November 2014, 9396 words, (English)

CONTENT 1. GOVERNMENT POLICY AND DEVELOPMENT OF LEGISLATION

..... 2 1.1. TOPIC OF THE WEEK ...

(Document AGRIV0020150706eaba000gt)

### Custodian REIT PLC Half Yearly Report

[Regulatory News Service](#), 02:01 AM, 25 November 2014, 21914 words, (English)

TIDMCREI RNS Number : 8695X Custodian REIT PLC 25 November 2014 25 November 2014 Custodian REIT plc ("Custodian REIT" or "the Company") Interim Results

(Document RNS000020141125eabp0001p)

### Latest Developments In EU Export Controls And Economic Sanctions

[Mondaq Business Briefing](#), 19 November 2014, 1545 words, Laurent Ruessmann, (English)

Following is a short update on recent developments in EU export controls and sanctions laws. Our Export Control Team would be glad to assist you further should you have any questions or seek additional information.

(Document BBPUB00020141119eabj000mm)

### 3-page Market special: A departure from Economics 101

[The Sunday Business Post](#), 23 November 2014, 1144 words, (English)

Central banks pumping hundreds of billions into retail banks will not get more plumbers or SMEs their overdraft facilities. In the 1950s, the economist Oskar Morgenstern asked a simple question, and got a very strange answer. Morgenstern was ...

(Document SBPM000020141123eabn0001j)

### Europe Data: New Car Registrations By Country, Y/Y % Chgs

[Market News International](#), 02:00 AM, 18 November 2014, 407 words, (English)

Release for: October 2014 Source: European Automobile Manufacturers Association Y/Y Jan-Oct Jan-Oct Y/Y Oct14 Oct13 %CHG 2014 2013 ...

(Document MARNEW0020141118eabi0004r)

### Signs of growth in retail rental re-emerge in regional areas

[The Sunday Business Post](#), 2 November 2014, 1062 words, (English)

The slow recovery in retail sales has at last begun to ripple out to some of the regional towns and cities. The slow recovery in retail sales has at last begun to ripple out to some of the regional towns and cities, according to Florence ...

(Document SBPM000020141102eab20003o)

### PH, Switzerland agree to narrow down trade gap

[Manila Bulletin](#), 12 November 2014, 621 words, (English)

The Philippines and Switzerland governments are working to narrow down the huge trade deficit against the Philippines, whose exporters are still having difficulties meeting the standards and quality requirements of a wealthy trading ...

(Document MABULL0020141111eabc0009d)

### Landsbankinn hf.: Advisory opinion of the EFTA Court on the inflation indexing provision of a bond

[NASDAQ OMX Nordic Exchanges - Company Notices](#), 06:14 AM, 24 November 2014, 929 words, (English)

Today the EFTA Court handed down its advisory opinion on the interpretation of provisions in Directive 87/102/EEC on consumer credit, and Directive 93/13/EEC on unfair terms in consumer contracts. The opinion was requested by the Reykjavik ...

(Document NASDQC0020141124eabo001md)

### Capital Control Plan

[Irish Independent](#), 12 November 2014, 82 words, (English)

Briefs ICELAND took another step toward easing capital controls in a move that will free creditors in its failed banks as the government moves ahead with a mortgage debt relief programme.

(Document IINM000020141112eabc0004p)

### Tax-free shopping around the world

[Manila Bulletin](#), 3 November 2014, 870 words, (English)

People around the world will try to avoid tax as much as they can. In fact, global companies tend to relocate their business operations in countries where taxes are relatively low, or at least business-friendly.

(Document MABULL0020141104eab3000ai)

### PH, Efta to start free trade talks

[Philippine Daily Inquirer](#), 26 November 2014, 189 words, (English)

The Philippines and the four member states of the European Free Trade Association (Efta) are set to start negotiations for a free trade agreement, following the successful conclusion of the so-called "scoping exercises" between the two ...

(Document AIWPHI0020141126eabq0001h)

### Germany to require board quota

[The Knoxville News Sentinel](#), 27 November 2014, 338 words, (English)

Germany to require board quota BERLIN — Germany's leading companies will need to have at least 30 percent women on their supervisory boards from 2016, according to a new directive being adopted by the government, Chancellor Angela Merkel ...

(Document KXVL000020141127eabr0000m)

### Cecilia S. Petersen, Knoxville

[The Knoxville News Sentinel](#), 27 November 2014, 1015 words, (English)

Cecilia S. Petersen, Knoxville Whatever happened to Thanksgiving? I am dismayed by the increasing commercialism of all holidays. Apparently, if it doesn't reap retail dollars, it's just not a holiday. Examine Veterans Day and Thanksgiving. ...

(Document KXVL000020141127eabr0001l)

### Lithuania's truck sales fall 28 pct in Jan-Oct y/y - ACEA

[Baltic Business Daily](#), 04:12 AM, 27 November 2014, 196 words, (English)

VILNIUS, Nov 27, BNS - All three Baltic countries recorded a decline in new heavy commercial vehicle sales for the ten months through October, figures from the European Automobile Manufacturers' Association (ACEA) showed on Thursday. (Document BALDAI0020141127eabr0012y)

### Equality, Korean style

[Joins.com](#), 21 November 2014, 773 words, (English)

American-style winner-takes-all business practices have become widespread, deepening inequalities. South Korea achieved two economic miracles from the 1960s through the 1990s. One is the often-cited passage from rags-to-riches. Per capita ... (Document JOONAI0020141120eab10005p)

### Brazil, US on the agenda during EFTA Ministerial

[ForeignAffairs.co.nz](#), 24 November 2014, 424 words, (English)

MIL OSI - Source: Government of Iceland - Press Release/Statement Headline: Brazil, US on the agenda during EFTA Ministerial 17.11.2014 Gunnar Bragi Sveinsson Minister for Foreign Affairs participated in the biannual Ministerial meeting of the ... (Document PARALL0020141125eabo000ec)

### UPDATE 2-EU insurance watchdog warns on low interest rate threat

[Reuters News](#), 04:18 PM, 30 November 2014, 515 words, (English)

\* EIOPA releases results of insurer stress tests \* EIOPA does not name individual insurers in results \* Sector generally well capitalised, EIOPA says (Adds European industry comment, detail) (Document LBA0000020141130eabu00fz2)

### Financial Adviser: The latitude of longevity.

[Financial Adviser](#), 20 November 2014, 1433 words, Joseph Lu, (English)

The Longevity Science Panel forecasts that life expectancy will continue to rise in the next decade, and so ways have to be found to meet the challenges - and opportunities - of an ageing population (Document FADV000020141127eabk00019)

### China and South Korea close to reaching free trade agreement

[EFE News Service](#), 10 November 2014, 235 words, (English)

Beijing, Nov 10 (EFE).- Chinese President Xi Jinping on Monday met with his South Korean counterpart Park Geun-hye and both announced a tentative free trade agreement, the state Xinhua news agency reported. (Document WFEF000020141110eaba0005m)

### Principle of home rule must be backed up by full tax powers

[The Herald](#), 5 November 2014, 1132 words, NO BYLINE, (English)

THE new cross-party Campaign for Scottish Home Rule ("Home rule supporters vow to win meaningful settlement", The Herald, November 4) is right to look for a principled approach to further Scottish devolution. These principles could rest on ... (Document GH00000020141105eab50003z)

### All roads lead to retail parks

[The Sunday Business Post](#), 30 November 2014, 820 words, (English)

Increased car sales, better roads and access to parking are driving the increase in rental rates for retail parks, writes Donal Buckley. Ireland's vastly improved motorway network could well be a key factor driving the latest buying trends ... (Document SBPM000020141130eabu0003p)

### New depository scheme from December 15

[Business Standard](#), 15 November 2014, 131 words, BS Reporter New Delhi, (English)

Indian corporates, both listed and unlisted, would be able to raise money through depository receipts in 34 foreign jurisdictions from December 15. Notifying the scheme, the finance ministry said any domestic company, both listed and ... (Document BSTN000020141114eabf0004fe)

### Britain doesn't need to be in Europe to strike important trade deals

[The Telegraph Online](#), 10:10 AM, 5 November 2014, 464 words, By Douglas Carswell, (English)

What should we make of the proposed Transatlantic Trade and Investment Partnership, asks Douglas Carswell What should one make of the proposed Transatlantic Trade and Investment Partnership or TTIP?  
(Document TELUK00020141105eab5003k4)

### European car sales up again in October.

[ANSA - English Media Service](#), 04:24 AM, 18 November 2014, 93 words, (English)

(ANSA) - Turin, November 18 - European car sales increased for the 14th consecutive month in October, European Automobile Manufacturers Association (ACEA) said on Tuesday. It said there were 1,112,628 new car registrations in the EU and the ...  
(Document ANSAEN0020141118eabi000b7)

### Norway economy: Coming to terms with falling oil prices

[Economist Intelligence Unit - ViewsWire](#), 7 November 2014, 1117 words, (English)

Norway is a wealthy economy and has come through previous negative oil shocks in decent shape, partly because the positive spin-offs from a falling krone deliver some necessary rebalancing of the economy. Yet if the sudden drop in global ...  
(Document EIUCP00020141108eab700033)

### Why relying on GDP will destroy the world

[The Telegraph Online](#), 11:01 AM, 17 November 2014, 754 words, [Lauren Davidson](#), By Lauren Davidson, (English)

GDP is not the only way to measure global growth, and leaning on it too heavily has left the world "teetering on the brink of environmental disaster and filled with anger and conflict."  
(Document TELUK00020141117eabh003v0)

### A 'Tax Day' Americans could love?

[CNN Wire](#), 12:11 PM, 26 November 2014, 1119 words, By Edward J. McCaffery, (English)

Editor's note: Edward J. McCaffery is Robert C. Packard Trustee Chair in law and a professor of law, economics and political science at the University of Southern California. He is the author of "Fair Not Flat: How to Make the Tax System ...  
(Document CNNWR00020141126eabq007bx)

### Food inflation hits eight-year low as shoppers benefit from price cuts of essentials in supermarket wars

[Mail Online](#), 06:48 AM, 5 November 2014, 575 words, CLAIRE HUGHES FOR THISISMONEY.CO.UK, (English)

Shoppers are benefiting from the lowest recorded food inflation figures since 2006 with falls in the price of kitchen essentials such as milk, cheese and eggs, new data indicates.  
(Document DAMONL0020141105eab50053h)

### Corporate taxes: Double-tax treaties

[Economist Intelligence Unit - Country Commerce](#), 1 November 2014, 948 words, (English)

India has comprehensive double-taxation agreements in force with 88 countries, covering all sources of income (however, a few of them specify simply that standard national rates of withholding will be charged). There are 13 agreements ...  
(Document EIUCD00020141206eab10003f)

### India's gender gap is getting worse

[Sunday Tribune](#), 2 November 2014, 365 words, (English)

NEW DELHI: Indian women still face some of the world's worst inequality in access to health care, education and work, despite years of rapid economic growth, a survey of 142 nations revealed.  
(Document SUNDTB0020141102eab20004c)

### All 3 Baltic countries post y/y growth in new car sales in Jan-Oct – ACEA

[Baltic Business Daily](#), 04:17 AM, 18 November 2014, 209 words, (English)

VILNIUS, Nov 18, BNS - All three Baltic countries posted growth in new car sales in January through October, data from the European Automobile Manufacturers' Association (ACEA) showed on Tuesday.  
(Document BALDAI0020141118eabi000rt)

### DIANNE Sharp, regional director of [...]

[The Journal, Newcastle](#), 20 November 2014, 754 words, PETER TROY, (English)

DIANNE Sharp, regional director of the CBI makes a good point in her column (The Journal Business, November 11) when she asserts that concern around free movement and migration is at the centre of continued membership of the EU.

However, ...

(Document THEJOU0020141120eabk0001f)

### Government sets its sights on new trade deal, Media release, 14 Nov 2014, Australian Minister for Trade and Investment, The Hon Andrew Robb...

[ForeignAffairs.co.nz](#), 17 November 2014, 406 words, (English)

MIL OSI - Source: Australian Government - Foreign Affairs and Trade - Press Release/Statement: Headline: Government sets its sights on new trade deal, Media release, 14 Nov 2014, Australian Minister for Trade and Investment, The Hon Andrew ...

(Document PARALL0020141117eabh0003o)

### World: 5-year forecast table

[Economist Intelligence Unit - ViewsWire](#), 21 November 2014, 884 words, (English)

Global assumptions Global forecast 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 Real GDP growth (%)

...

(Document EIUCP00020141123eabl0001l)

### Icelandic central bank cuts key interest rate to 5.75 percent

[Reuters News](#), 04:07 AM, 5 November 2014, 114 words, (English)

COPENHAGEN, Nov 5 (Reuters) - Iceland's central bank lowered its key interest rate to 5.75 percent from 6.00 percent on Wednesday and said inflation was likely to fall further in the next few months and remain at or below target through ...

(Document LBA0000020141105eab500akr)

### OECD raises growth forecast for Russian GDP in 2014 to 0.7%, lowers to zero for 2015

[Interfax: Russia & CIS Business and Financial Newswire](#), 10:16 AM, 6 November 2014, 254 words, (English)

MOSCOW, Nov 6 (Interfax) - The Organization for Economic Cooperation and Development (OECD) is expecting Russia's GDP to grow 0.7% in 2014, followed by zero growth in 2015 and 2% growth in 2016, the organization said in a statement.

(Document DAIBN00020141106eab60015r)

### Phl, European free trade group set talks

[The Philippine Star](#), 24 November 2014, 410 words, By Louella D. Desiderio, (English)

MANILA, Philippines - The Philippines and European Free Trade Association (EFTA) are set to hold this month the first round of meetings for a planned free trade agreement (FTA) in line with the aim to start negotiations by next year.

(Document PHSTAR0020141123eabo0000l)

### World: 5-year forecast table

[Economist Intelligence Unit - ViewsWire](#), 1 November 2014, 874 words, (English)

Global assumptions Global forecast 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 Real GDP growth (%)

...

(Document EIUCP00020141102eab100044)

### Philippines: High-level Swiss business delegation visit Manila, Cebu

[Thai News Service](#), 25 November 2014, 600 words, (English)

Section: General News - The visit of Swiss business delegation in Manila and Cebu this month further boosted economic relations between the Philippines and Switzerland.

(Document THAINS0020141124eabp0005z)

### Investors Chronicle - magazine and web content: RPC packs a punch.

[Investors Chronicle - Magazine and Web Content](#), 27 November 2014, 313 words, Daniel Liberto, (English)

Success outside Europe and a new acquisition sent shares in the plastic packager up 5 per cent on results day. Rigid plastic package supplier RPC (RPC) overcame flat economic growth in its core European market and high polymer prices to post

...

(Document INVR000020141210eabr0003n)

### Irish vote against sovereign debt mechanism puzzling

[The Irish Times](#), 14 November 2014, 725 words, [arthur beesley](#), Arthur Beesley, (English)

A few weeks ago, the United Nations General Assembly adopted a resolution to establish a new international mechanism to restructure the sovereign debt of bankrupt countries, the noble objective being to prevent any repeat of Argentina's ...  
(Document IRT1000020141114eabe0003i)

### EMU Data: Flash GDP By Member State; Q/Q, Y/Y Pct Change

[Market News International](#), 05:00 AM, 14 November 2014, 664 words, (English)

Release for: Third Quarter 2014(flash) Source: Eurostat Q/Q Pct Change Y/Y Pct Change 4Q13 1Q14 2Q14 3Q14 4Q13 1Q14 2Q14 ...  
(Document MARNEW0020141114eabe00085)

### EU/EMU Data: Harmonised CPI By Nation

[Market News International](#), 05:12 AM, 14 November 2014, 470 words, (English)

Release for: October 2014(final) Source: Eurostat Oct14 Sep14 Aug14 Jul14 Oct13 Oct14 y/y y/y y/y y/y ...  
(Document MARNEW0020141114eabe0008a)

### Europe patent for colorectal cancer prognostic technology

[Scoop.co.nz](#), 07:35 PM, 25 November 2014, 812 words, Pacific Edge, (English)

26 November 2014 Europe grants Pacific Edge patent for colorectal cancer prognostic technology The European Intellectual Property Office which operates across 38 countries including all European Union members, has awarded Pacific Edge a ...  
(Document SCCONZ0020141126eabq00065)

### What Does IMF's Appointment of Crisis Veteran Say About Europe's Economy?

[Dow Jones Institutional News](#), 12:56 PM, 3 November 2014, 263 words, [Ian Talley](#), By Ian Talley, (English)

If the International Monetary Fund's latest economic appointment is any indication, Europe's economy must still be in real trouble. IMF chief Christine Lagarde named Poul Thomsen, architect of the controversial Greek bailout and one the ...  
(Document DJDN000020141103eab3002yx)

### FTA's smoother Chinese capital should give nation a welcome shot in the arm

[The Australian](#), 12 November 2014, 1046 words, [Glenda Korporaal](#), Glenda Korporaal, (English)

IT is too early to tell just how much of a stimulus the free trade agreement Australia is expected to sign with China will be to our economy. But the deal, which could be signed on Monday at the G20 leaders meeting in Brisbane, has the ...  
(Document AUSTLN0020141111eabc0004c)

### World Furniture Outlook 2014-2015

[PR Newswire \(U.S.\)](#), 04:00 PM, 27 November 2014, 451 words, (English)

LONDON, Nov. 27, 2014 /PRNewswire/ -- The World Furniture Outlook 2014-2015 by CSIL provides an overview of the world furniture industry with historical statistical data (production, consumption, imports, exports) and 2014 and 2015 ...  
(Document PRN0000020141127eabr00048)

### TABLE-OECD overview of deficit and inflation forecasts

[Reuters News](#), 05:30 AM, 25 November 2014, 331 words, (English)

PARIS, Nov 25 (Reuters) - Following are the main public deficit and consumer-price inflation projections from the Organisation for Economic Cooperation and Development's latest Economic Outlook, released on Tuesday. ...  
(Document LBA0000020141125eabp000bg)

### Interfax Russia & CIS Business and Financial Daily

[Interfax: Russia & CIS Business and Financial Daily](#), 03:51 PM, 6 November 2014, 13258 words, (English)

07.11.14 06.11.14 Official Exchange Rate of Ruble to Dollar (ruble/\$1) 45.1854 44.3993 Official Exchange Rate of Ruble to Euro (ruble/EUR1) 56.5450 55.6234 ...

(Document DAFIR00020141107eab600001)

### "Who Says We Do Not Work?" (No. of pages: 8)

[Economic & Political Weekly](#), 15 November 2014, 9035 words, Sujata Gothoskar, Apoorva Kaiwar, (English)

SPECIAL ARTICLE november 15, 2014 vol xlix no 46 EPW Economic & Political Weekly 54 "Who Says We Do Not Work?" Looking at Sex Work Sujata Gothoskar, Apoorva Kaiwar Sex workers' organisations have argued against trafficking and see it ...

(Document ECPOLW0020141202eabf0002t)

### Economics

[Turan Information Agency \(Azerbaijan\)](#), 08:04 AM, 28 November 2014, 2927 words, (English)

Milli Majlis Approves Draft Budget 2015 Decline Expected in the Oil and Gas Sector Azerbaijan Exports Iron Ore at a Price 2.5 Times Lower than the World Price Accord Corporation Launches Kutaisi Bypass Road Placing a Large Batch of Bonds of the ...

(Document TURNAG0020141128eabs0005q)

### Interfax Russia & CIS Business and Investment Weekly

[Interfax: Russia & CIS Business & Investment Weekly](#), 04:44 PM, 7 November 2014, 26782 words, (English)

07.11.2014 31.10.2014 Official Exchange Rate of Ruble to Dollar (ruble/\$1) 45.1854 43.3943 Official Exchange Rate of Ruble to Euro (ruble/EUR1) 56.5450 54.6378 ...

(Document INVST00020141121eab700001)

### Investing in real estate abroad and at home

[Today.az](#), 28 November 2014, 1832 words, (English)

/AzerNews/By Gulgiz Dadashova Buying a house is without a doubt one of the most important decisions that you will make in your life. Besides turning a house into a home, real estate is also an alluring investment.

(Document DLSDAZ0020141128eabs0000d)

### Why China's Easing Measures Are Failing -- Market Talk

[Dow Jones Institutional News](#), 02:27 AM, 6 November 2014, 1532 words, (English)

0727 GMT [Dow Jones] Beijing's targeted easing measures are not bolstering economic growth this year and sentiment remains weak, Standard Chartered economists Li Wei says. "It started as a deleveraging process and a property market ...

(Document DJDN00020141106eab600154)

### EU passenger car registrations rise 6.5% y/y during October – ACEA

[IHS Global Insight Daily Analysis](#), 18 November 2014, 2555 words, Ian Fletcher, (English)

Passenger car registrations in the European Union (EU) have grown again in October, but the improvement is very much relative to how poor the performance in this market has been.

(Document WDAN00020141118eabi00008)

### Analyzing Whether Countries Are Equally Efficient at Improving Longevity for Men and Women

[American Journal of Public Health](#), 1 November 2014, 4089 words, Douglas Barthold; Arijit Nandi; José M Mendoza Rodríguez; Jody Heymann, (English)

Objectives. We examined the efficiency of country-specific health care spending in improving life expectancies for men and women. Methods. We estimated efficiencies of health care spending for 27 Organisation for Economic Co-operation and ...

(Document GAPH00020141106eab10000s)

### BBC Monitoring quotes from China, Taiwan press 18 Nov 14

[BBC Monitoring Asia Pacific](#), 01:28 AM, 18 November 2014, 1677 words, (English)

The following is a selection of quotes from editorials and commentaries carried in 18 November 2014 website editions of mainland Chinese, Hong Kong and Taiwan newspapers and news portals available to BBC Monitoring. Unless otherwise stated, ...

(Document BBCAPP0020141118eabi0012x)

### (Insight-EU-Dossier) TiSA: EU pushes to lock in liberalisation of services worldwide By Craig James Willy, dpa

8/15/2018

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[dpa Insight EU](#), 12:57 PM, 20 November 2014, 4321 words, (English)

The European Commission is pushing for a deal to free up as many services as possible to international competition, with potential big gains for companies and consumers. But critics fear liberalisation could mean deregulation, privatisation ...  
(Document DPAINSE020141120eabk00001)

## Cyprus's Shipping Tax Regime

[Mondaq Business Briefing](#), 18 November 2014, 1993 words, Philippos Aristotelous, (English)

Cyprus is among the world's top shipping centres, with a government policy which actively attracts investment to the island. This article looks at the features and exemptions which make it so attractive to shipping businesses.  
(Document BBPUB00020141118eabi000ht)

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