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Interest Rate Repression Around the World

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WORLD BANK GROUP

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The background image is a composite of two photographs. The upper portion shows two tall, modern skyscrapers with glass facades, illuminated from within, set against a dark sky. The lower portion shows a busy city street at night, with a crosswalk in the foreground. Pedestrians are captured in motion blur, crossing the street. A red traffic light is visible on the right side of the frame. The overall scene conveys a sense of a bustling, modern urban environment.

Financial repression resurfaced in the wake of the global financial crisis and might become a common feature in the post Covid-19 world. To advance knowledge and inform policy advice, this paper presents a new database on interest rate controls, a popular form of financial repression, based on a survey with 108 countries representing 88 percent of global GDP. The data cover such aspects of interest rate controls as types of controls, legal basis, intended objectives, methodologies and enforcement rules. In an attempt to provide a meaningful characterization of the data, this paper also provides a preliminary estimate of the degree of bindingness of the interest rate control regime in a country and presents simple correlations with other financial repression policies. The paper finally discusses general principles of an interest rate management policy that can minimize adverse side effects of binding controls while laying down the basis for a smooth transition or return to market-determined interest rates.

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Introduction

Financial repression is an umbrella term referring to government policies that prevent financial intermediaries from functioning at their full capacity.¹ It can take several forms, including *de jure* or *de facto* caps or floors on interest rates; directed lending to the government by captive domestic audiences such as banks and pension funds; limits on cross-border capital flows; imposition of lending quotas to financial intermediaries; restrictions on market entry in the financial sector; “excessive” bank reserve and liquidity requirements; and government ownership or control of banks (Reinhart and Sbrancia, 2015). The key rationale for the government to implement financial repression policies is to control fiscal resources to finance public spending; to allocate subsidized credit to priority sectors of the economy; and to maintain financial stability by limiting competition.

Most countries around the world have experienced some forms of financial repression at one point in their recent history. These policies were common following World War II, when many advanced economies practiced it on a large scale as a means of “liquidating” their substantive postwar debt via negative real interest rates (Reinhart and Sbrancia, 2015). Financial repression policies became less common in the 1980s, when advanced economies turned decisively towards financial liberalization. During the 1960s and until the 1990s many emerging markets and developing economies (EMDEs) too used financial repression as a part of the policy mix aimed at supporting state-led industrial policies and import substitution strategies. Confronted with the mixed results of these approaches and under pressure from increasingly integrated financial markets, EMDEs largely withdrew from repressive policies and started liberalizing their financial systems in the late 1990s and 2000s.

Financial repression forcefully reemerged in the wake of the Global Financial Crisis (GFC), a trend that is likely to strengthen and consolidate in the post Covid-19 world. During the last decade or so and in the aftermath of the Covid-19 pandemic, numerous advanced economies have resorted to unconventional policies, including extensive government and corporate bond purchases, which have contributed to flatten the yield curve, compounding the low, zero or, in some cases, negative interest rate policies.² Before the outbreak of the Covid-19 crisis, many EMDEs were mostly concerned with resisting currency misalignments and potential overheating arising from the search for yield. Accordingly, they resorted to targeted capital controls, whose legitimacy under certain circumstances has been restored by the IMF (2012), and other financial repression measures, including high reserve requirements. The Covid-19 pandemic coupled with deteriorating terms of trade has dramatically reversed that trend, with EMDEs currently forced to respond to a global retreat from risk and destabilizing market dynamics. While the outlook remains highly uncertain, policies in advanced economies and EMDEs combined with the need to deal with an unprecedented rise in public and private sector debt will likely provide strong incentives for the return to more tightly regulated domestic financial environments, which is the essence of what is commonly referred to as “financial repression”. It is, therefore, a useful exercise to start examining these developments to provide guidance to policymakers who wish to minimize the welfare costs associated with financial repression policies.

1. See Ito (2008).

2. Alternative arguments for the historically low levels of interest rates observed in the US and other advanced economies, largely unrelated to financial repression policies, have been advanced recently (see, for example, Bernanke, 2005; and Summers, 2015). For a discussion on secular trends in interest rates around the world see, for example, Del Negro et al. (2019) and Schmelzing (2020).

This paper focuses on one of the most commonly used strategies of financial repression: interest rate controls (IRCs). Restrictions on interest rates have been historically part of the policy toolkit of many countries and have been largely used in the post GFC environment. For example, Ferrari et al. (2018) find that since 2011 at least 30 EMDEs have introduced new interest rate regulation or tightened existing restrictions. This trend seems to be regaining strength in the context of the Covid-19 pandemic, with a rapidly growing list of countries either modifying existing IRCs or introducing new ones. For example, during the first month after the declaration of the pandemic by the World Health Organization, countries such as Argentina, China, Finland, Sri Lanka and Vietnam opted for such measures (Box 1). While some measures may turn out to be temporary, others may become permanent. It is nonetheless a fair assumption that more countries will consider IRCs as a means to deal with the post Covid-19 consequences. Some countries may choose to control interest rates closely, and the way these controls are implemented as well as the level at which interest rates are set may differ significantly, with different welfare outcomes. In some countries, interest rates may be administered flexibly, in an attempt to track movements of market rates; other countries may decide to waive this flexibility, and large divergences between administered rates and market rates may emerge, including negative real rates.

This paper focuses in particular on *de jure* IRCs in lending and deposit markets. In addition to explicit regulation, governments can and often control interest rates through political pressure, moral suasion, implicit subsidies in various financing support programs, and other interventions. For example, in the context of monetary policy strategies and tools in the presence of low inflation and policy rates, there are ongoing discussions around yield curve controls, a tool applied in Japan since 2016, which is ultimately a form of *de facto* interest rate cap (see Bernanke, 2020, for a discussion). However, given the difficulties to track and measure *de facto* IRCs in a cross-country setting, this paper takes stock only of legal or *de jure* IRCs, that is, administered caps or floors to interest rates via explicit regulation. Specifically, we focus on IRCs in lending and deposit markets, acknowledging that *de jure* restrictions can also apply to interbank and bond markets. Finally, while this study focuses on interest rate repression, it is important to keep in mind that IRCs are often part of a broader financial repression policy toolkit, as we attempt to document in this paper. However, the analysis of other dimensions of financial repression is beyond the scope of this paper.

Interest rate repression provides one of the classic examples of welfare-decreasing government interventions in financial markets. The standard argument against IRCs is that they discourage both savings and investment thus inhibiting economic growth (Mc Kinnon, 1974; Shaw, 1973). It is argued that because financial institutions are essential to the efficient allocation of capital, free competitive markets are needed to ensure that resources go to projects with the highest risk-adjusted rates of return. If governments restrict interest rates and replace efficient market allocation mechanisms with public selection processes, the result is that capital is less efficiently allocated. However, market-based financial intermediation involves a certain degree of moral hazard and adverse selection problems, and financial institutions may ration credit at less-than-market clearing prices to reduce their risks (Stiglitz and Weiss, 1981), justifying a government intervention.

These theoretical arguments have been tested by numerous empirical studies. Many studies have confirmed a negative association between interest rate repression and several macroeconomic outcomes such as savings rates, investment and economic growth (Fry, 1978, 1997; Roubini and Sala-i-Martin, 1992; Jafarov et al., 2019). Interest rate repression has also been found to be harmful to financial development. Specifically, caps on lending rates lead to a reduction in the overall supply of credit, with non-trivial effects on financial inclusion as banks are forced to reallocate credit from small, risky borrowers to large commercial borrowers and the government (Heng, 2015; Safavian and Zia, 2018; Alper et al., 2019; Madeira, 2019) and withdraw services from remote areas (Miller, 2013). Transparency is also reduced (Helms and Reille, 2004), and, to the extent that IRCs affect the viability of small banks, risks to financial stability can increase via contagion (Safavian and Zia, 2018; Alper et al., 2019). However, the existing literature usually refers to very severe forms of interest rate repression, often leading to negative real interest rates. In milder forms, i.e. when the rate of return to financial assets is still positive although lower than the market rate, the impact of interest rate repression on economic and financial development may not be very significant, other things being equal. IRCs were common in a group of rapidly growing economies in the 1980s, including Chile, China, Japan and South Korea (Zahid, 1995).

Interest rate liberalization is not unproblematic. While deregulation of interest rates advanced across much of the world during the period from the early 1980s to the years preceding the GFC (Abiad and Mody, 2005; Abiad et al.,

3. In February 2020, Bangladesh also announced the introduction of a restrictive system of IRCs, which became effective April 1, 2020. IRCs in Bangladesh encompass a 9 percent ceiling on lending rates on all products except for credit cards, and a 6 percent cap on deposit rates. The decision, which applies only to private banks, was not motivated by the Covid-19 crisis but rather by longstanding domestic complaints about high borrowing costs and recent upward pressure on bank funding costs.

2010), it proved to be a double-edged sword. In most cases interest rate liberalization led to higher real interest rates, shifted surplus from borrowers to savers, and expanded access to credit opportunities. For example, in India many small businesses gained access to credit after liberalization (Hanson, 2001). At the same time, interest rate volatility increased after deregulation, contributing to a rise in the probability of experiencing a banking crises (Kaminsky and Reinhart, 1999; Demirguc-Kunt and Detragiache, 2005).⁴ However, financial instability episodes occurred with a

higher frequency in countries with weak prudential regulation and supervision (Noy, 2004; Angkinand et al., 2010) and underdeveloped institutional and market infrastructure (Pereira Leite and Sundarajan, 1990; Mehran et al., 1995; Feyzioglu et al., 2009), underlying the crucial importance of this set of preconditions for the pace and sequencing of deregulation. This is because interest rate liberalization is not only about price reform; it also needs to involve removing all sources of frictions while building key institutions.

> > >

BOX 1. IRCs in the Time of Covid-19

ARGENTINA has had a ceiling on credit card interest rates since 1999. In February 2020, the restriction on credit card interest rates was hardened by the imposition of a fixed cap at 55 percent. In April 2020, the central bank reduced the fixed cap on credit card interest rates to 43 percent and set a minimum rate for retail term deposits of up to US\$ 1 million, later expanded to all deposits. The floor was established at 70 percent of the monetary policy rate, which translated into a term deposit rate of 26.6 percent.

CHINA formally ended its 20-year long journey towards interest rate liberalization in October 2015, with the removal of the last ceiling restriction on deposit rates. Since then, it has further strengthened the interest rate regime with the introduction in 2019 of a new market-based system for determining lending rates, which among others is expected to improve the transmission of monetary policy and lower borrowing costs. However, in an attempt to prevent unhealthy competition in the funding markets in the context of the Covid-19 liquidity squeeze, the central bank in March 2020 imposed a cap on some structured deposit rates, which were trading higher than those on term deposits.

FINLAND modified its Consumer Protection Act in September 2019 in an effort to reign in double digit growth in payday loans that was accompanied by increasing bad credit records. The authorities cited the need for consumer protection with more transparent pricing and significantly reduced the cap on all unsecured loans from 50 percentage points above the Finnish Interest Act reference rate (then at 7 percent) to a fixed ceiling of 20 percent. In addition, other than interest-related costs were capped at 0.01 percent per day and € 150 per year. The Consumer Protection Act was revisited in April 2020, when the government introduced changes to the law due to the Covid-19 outbreak. The amendment temporarily reduced the cap on unsecured consumer loans from 20 percent to 10 percent until the end of 2020.

SRI LANKA announced a set of relief measures against Covid-19 in March 2020, which included a directive to the central bank to set a 15 percent cap on domestic credit card transactions up to LKR 50,000 and a 50 percent reduction in monthly charges. The authorities also instructed all financial institutions to provide working capital loans at an interest rate of 4 percent. In April 2020, the central bank introduced a 12 percent cap on pawning advances of licensed banks.

VIETNAM has interest rate ceilings both on lending and on deposit transactions. Limits on deposit interest rates were introduced in 2010 as a response to the prevailing volatility in liquidity constrained financial institutions. The ceiling on deposit rates initially covered all deposits and was gradually narrowed to cover short term deposits (with maturities of one- to less than six- months), while its level was reduced from 15 to 5 percent in 2019. On the other hand, the cap on lending interest rates had the purpose of directing credit to a number of industries and sectors (agriculture, high-tech industries and exporters). The regulation focused on short term loans, imposing a maximum rate of 15 percent, which was gradually reduced to 6 percent in 2019. In March 2020, the central bank announced a set of measures to contain the effects of Covid-19, including a reduction in its interest rate cap for deposits in local currency from 5 to 4.75 percent. Short term lending rates on loans denominated in local currency for priority sectors were also reduced from 6 to 5.5 percent.

4. Recent literature finds that the relationship between financial liberalization and financial instability is more complicated and that non-linearities may be at play. See, for example, Loayza and Ranciere (2006); Ranciere et al. (2006); Kaminsky and Schmukler (2008); Angkinand et al. (2010).

To contribute to a better understanding of IRCs, this paper presents a new dataset based upon a survey with World Bank Group members and discusses general principles of an interest rate management policy. A questionnaire was submitted to financial sector authorities and bankers' associations in more than 150 jurisdictions during 2019 to investigate the legal framework associated with the implementation of *de jure* IRCs, document their application, and provide details on their functioning. We received responses from 108 countries at all levels of income and in all parts of the world. To the best of our knowledge, this paper is the first to provide “stylized facts” on IRCs on a global basis. In an attempt to provide a potentially meaningful characterization of a country's interest rate control regime, the data collected through the survey are then used to attempt to provide a preliminary estimate of the degree of bindingness of IRCs in a country and explore whether the degree of bindingness of IRCs is associated with other forms of financial repression. In countries where level and structure of interest rates are out of equilibrium, an interest rate management may be necessary. To that end, this paper finally discusses the general contours of such a policy, which could contribute to minimize the adverse side-effects of interest rate repression while preparing for a smooth transition or return to market-determined rates.

The key findings of this paper are the following:

- **IRCs are common in countries across different income levels and legal systems though some regional differences emerge.** A total of 63 countries out of 108 surveyed responded that they have IRCs in place. Both high income countries and low and middle income countries show a similar prevalence of IRCs. The share of countries with *de jure* IRCs also remains roughly unaltered when countries are divided according to their law system, though we observe a relatively higher prevalence of IRCs in common law countries. Geographically, IRCs tend to be more popular in regions such as South Asia, the Americas, and Sub Saharan Africa.

- **Caps on lending rates and floors on deposit rates are the most frequent types of IRCs.** Most of the countries imposing IRCs have ceiling on lending rates, regardless of the level of income. Lending rate ceilings typically apply to commercial banks and often to microfinance institutions. Floors on deposit interest rates are also commonplace, especially within low and middle income countries.
- **Limits on lending rates are usually imposed across all business and retail lending products in both high income and low and middle income economies.** In retail markets, IRCs typically focus on consumer loans and microcredit, though high income countries have more breadth in terms of specific products, including credit cards and residential real estate loans. In the case of deposit rate regulation, we observe almost as many countries with product-specific regulation as those with all-encompassing restrictions.
- **Consumer protection concerns are the main stated reason for the introduction of IRCs, especially by those countries that imposed a ceiling on loan rates.** Financial stability is also a driving factor for many countries, especially among those setting a ceiling on deposits interest rates. Less cited reasons for introducing IRCs relate to resource allocation and competition, especially by countries with deposit rate caps. Other reasons such as financial inclusion or strengthening the monetary policy transmission channels are reported by countries setting a floor for deposit interest rates.
- **Fixed limits are the typical methodology employed for setting IRCs, which generally apply only to domestic currency denominated transactions and are accompanied by limits on fees.** However, some countries opt for flexibility when imposing caps on rates. IRCs are typically applied to transactions denominated

in local currency, especially deposit rate floors. Half of the countries with IRCs also impose limits on fees. Restrictions on administrative and servicing fees aim to curtail the ability of financial intermediaries to increase the effective lending rate beyond the established ceiling or to decrease the effective deposit rate below the established floor. We find that limits on fees are mostly imposed in the context of lending rate ceilings. Finally, almost half of the countries with IRCs sanction breaches to IRCs through administrative penalties, which are typically enforced by the banking supervisor.

- **IRC bindingness in 2019 presented a diverse landscape.** Gaps between legal limits and actual lending rates in real terms, used as a proxy to preliminary estimate the degree of bindingness of IRCs, portray a very heterogeneous map, with the large majority of countries showing a relatively large gap between the cap and the actual rates and only five countries exhibiting a gap of zero. Real gaps for commercial bank deposit rates are generally narrow in countries that reported the presence of IRCs in these markets, with only three countries showing a gap of zero. Actual deposit rates are negative in a few economies with deposit rate ceilings. Finally, actual deposit rates paid by commercial banks unsurprisingly show a general convergence towards floors, with a few economies showing negative real floors and actual rates.
- **The degree of bindingness of lending IRCs is associated with other financial repression policies.** Pairwise correlations suggest that the relative bindingness of real lending ceilings is associated with a higher share of state-owned commercial banks, which governments can use to direct credit, and more stringent *de jure* capital controls, which can be used to influence size and composition of capital flows. Correlations become stronger, including for other proxies of financial repression, when lending ceilings that are determined relative to a market benchmark are excluded from the sample.

This paper builds on and extends recent efforts to take stock of IRCs around the world. There have been various attempts in recent years to classify IRCs internationally. However, existing studies either take a narrow geographical perspective, focusing on EMDEs (Helms and Reille, 2004) or advanced economies (see Reifner et al., 2010, for the EU; and Dasgupta and Mason, 2019, for the US), or, when taking a global perspective, they focus on lending interest rate caps only (Maimbo and Gallegos, 2014; Ferrari et al., 2018). In a paper similar to ours, Jafarov et al. (2019) attempt to compile a database on all types of IRCs and construct a basic index (i.e. based on binary variables) of IRCs across economies. However, like in previous studies except for Reifner et al. (2010), it is based on data and information from secondary sources. To the best of our knowledge, our paper is the first to take stock of IRCs around the world based on a survey involving a large number of economies and covering several aspects of the countries' interest rate regime. Our paper also complements recent literature aimed to assess the welfare impact of IRCs at the country level (e.g. Safavian and Zia, 2018, and Alper et al., 2019, for Kenya; or Madeira, 2019, and Schmukler et al., 2018, for Chile).

The remainder of the paper proceeds as follows. The next section describes the data and how they were obtained. It also draws upon our new and comprehensive database to provide a selective overview of key aspects of IRCs collected through the survey. The third section uses the data to provide a preliminary estimation of the degree of bindingness of IRCs by calculating the gap, expressed in real terms, between legal restrictions and actual interest rates. This section also presents pairwise correlations between the degree of IRC bindingness and other dimensions of financial repression. The fourth section discusses general principles of an interest rate management policy that in cases where IRCs are binding could contribute to minimize the adverse side-effects of interest rate repression while laying down the basis for a smooth transition or return to market-determined interest rates. The final section concludes.

2

Overview of the Survey Data

We designed and implemented a survey to collect key features of *de jure* IRCs on lending and deposit markets around the world. The formulation and completion of the survey entailed a number of inter-related steps. Leveraging existing contacts at central banks and financial supervisory authorities, the initial outreach effort targeted the pertinent staff within local regulators and supervisors. However, given the sometimes-elusive nature of IRCs, with implementing authorities varying from central banks to different ministries, we also decided to contact the local banking associations, as these are in a prime position to provide specific references to the domestic or regional institutional arrangements. With the aim to cover as many countries as possible, the outreach effort included more than 150 jurisdictions.

Despite our best efforts, our survey faced several challenges. Not every country responded to the survey. Also, officials from the same country or even the same agency sometimes provided conflicting answers. Therefore, we had a second outreach effort to non-respondent local authorities relying on the contacts of World Bank Group financial sector experts, while we also followed-up with the authorities that had provided inconsistent or incomplete responses. In a few countries where we still faced difficulties getting a response from the local authorities, we relied on the answers of World Bank Group financial sector experts.⁵ In addition, in an attempt to reconcile any inconsistencies, we checked our responses with Ferrari et al. (2018), who recently took stock of lending interest rates caps collecting data from private and public sources; with the 2017 Global Financial Inclusion and Consumer Protection Survey, which included one question on interest rate caps and pricing limits on loans (GFICPS 2017);⁶ and with Reifner et al. (2010), who collected comprehensive data on interest rate caps in the EU. We gave preeminence to citations to laws and regulations, creating a repository for these as a complement to our survey. In total, we received responses from 108 countries, which were provided by 91 central banks and financial supervisory authorities, 20 local banking associations and 9 World Bank financial sector experts. These 108 countries represent 88 percent of the global GDP and the sample is balanced in terms of levels of income and geographical representation. The information from the responses refers to 2019. The full list of surveyed countries along with the details of the IRC framework of countries that reported the presence of IRCs are presented in the annexes.

5. These countries are Algeria, Argentina, Bangladesh, China, Ethiopia, Ghana, Kenya, South Africa and the United States.

6. Question D.13 in the GFICPS 2017 was: "Are financial institutions subject to explicit caps on interest rates or other methods that limit loan pricing, e.g. maximum profit margins or maximum spread?"

The survey comprised five separate parts, with 276 fields to be completed, covering the following key aspects of a country's IRC framework:

- Year of introduction of IRCs;
- Types of IRCs (e.g. ceilings and/or floors).
- Financial products impacted by IRCs (e.g. lending and/or deposit products);
- Financial institutions affected by the IRCs;
- Reasons for introduction of IRCs;
- Basis of regulation;
- Methodology for determining IRCs (e.g. fixed and/or relative rate limits);
- Currency denomination of lending and deposit transactions where IRCs apply;
- Limits on fees associated with IRCs;
- Sanctions and enforcement mechanisms.

IRCs are common in countries across different income levels and legal systems though some regional differences emerge. Table 1 presents a general overview of IRCs in 108 countries grouped by region, income level and legal system.⁷ A total of 63 countries responded that they have IRCs in place. Both high income countries and low and middle income countries show a similar prevalence of IRCs at about 60 percent of their respective surveyed samples.⁸ This even distribution across income levels is also reflected in a GDP-weighted average of 66 percent of the sample with IRCs, though this hinges on the fact that China had unwound its IRCs by 2019 and our survey does not consider the recent policy response to Covid-19.⁹ The share of countries with *de jure* IRCs also remains roughly unaltered when countries are divided according to their legal system, though we observe a relatively higher prevalence of IRCs in common law countries.¹⁰ Differences appear when the regional dimension is introduced, with a bigger fraction of high income relative to low and middle income countries in Europe & Central Asia reporting IRCs, while the opposite is observed in East Asia & Pacific. In general, IRCs are more popular in regions such as South Asia, the Americas, and Sub Saharan Africa.

> > >

TABLE 1 - Number of Countries with IRCs (total countries surveyed in parentheses)

REGION	HIGH IN-COME	LOW & MIDDLE INCOME	CIVIL LAW	COMMON LAW	MIXED SYSTEMS	TOTAL
East Asia & Pacific	2 (6)	4 (7)	2 (3)	2 (3)	2 (7)	6 (13)
Europe & Central Asia	15 (23)	7 (15)	20 (34)	2 (3)	0 (1)	22 (38)
Middle East & North Af-rica	1 (3)	1 (5)	-	-	2 (8)	2 (8)
North & South America	8 (11)	11 (17)	9 (15)	9 (11)	1 (2)	19 (28)
South Asia	-	3 (4)	-	-	3 (4)	3 (4)
Sub-Saharan Africa	0 (1)	11 (16)	1 (1)	-	10 (16)	11 (17)
Total	26 (44)	37 (64)	32 (53)	13 (17)	18 (38)	63 (108)

The introduction of IRCs has been more recent in low and middle income countries. Due to the difficulty to find out the evolution of local regulation over the past few decades, our survey only inquired about the regulation currently in effect. Nonetheless, we did collect the date of introduction of IRCs, which were either provided by the regulators or could be obtained from the citations of laws and regulations. When looking at the earliest time of introduction of IRCs by country, there is a clear contrast between high income and low and middle income economies, with a much larger share of IRCs introduced more than three decades ago in high income economies, including usury laws that date back to

the beginning of the twentieth century such as those in Germany, introduced in 1900, and Spain, in 1908. On the other hand, a larger share of low and middle income countries introduced IRCs in recent years, and this trend seems to be accentuating with the unravelling of the Covid-19 crisis (Figure 1). Of particular interest are the experiences of Zambia, which introduced lending rate caps in 2012 but removed them in 2015, and of Kenya, which established IRCs in 2016 only to abolish them three years later (Box 2). In both cases, the reversal followed the realization of the tangible unintended consequences of IRCs for financial sector and real outcomes.

7. Regional and income level classifications are consistent with the World Bank classification while legal origins are based on JuriGLOBE database of the University of Ottawa.

8. We conducted a two-sample t test for equality of means by income group and found no statistically significant difference between high income and low and middle income economies.

9. China's influence is even greater if the sample is weighted by deposit money banks' assets: these stand at 175 percent of the Chinese GDP and 29 percent of our full country sample (source: Global Financial Development Database).

10. 76 percent of the countries under common law in our sample have IRCs. That is significantly higher (at 5%, one-tail) than countries with civil codes or mixed legal systems.

> > >

FIGURE 1 - Date of Introduction of IRC

> > >

FIGURE 2 - Reasons for Introducing IRC (or not)

*Countries were allowed to select multiple reasons, so totals exceed 100%

With IRC Without IRC

> > >

BOX 2. IRCS IN KENYA

Kenya has become a posterchild case as of late for the pervasive effects that IRCs can create for financial access. In September 2016, lawmakers passed a law that introduced draconian IRCs on both lending and deposit markets. Specifically, the law imposed ceilings on more than half of all existing loans and these caps were accompanied by a floor on all time deposits. Caps on lending rates were determined applying a spread over the central bank policy rate. The immediate effect of the law on interest rate controls was a strong contraction in bank credit to MSMEs, as the sector became credit rationed. Smaller banks' balance sheets were disproportionately affected as their business model relied on higher-risk/higher-return borrowers. Not only riskier borrowers but lending to the private sector in general was affected, as banks redirected their lending to the public sector, which, at a given ceiling rate, could provide higher creditworthiness with no screening costs and looser prudential requirements. Moreover, the breadth of IRCs appeared to affect monetary policy as well, as the Central Bank of Kenya's ability to lower the policy rate in the face of lower growth and lower inflation was constrained due to the side effect of exacerbating the credit rationing for higher risk borrowers (Alper et al., 2019). The Kenyan authorities eventually repealed the IRCs in November 2019, blaming them for reducing credit to the private sector, damaging economic growth and weakening the effectiveness of monetary policy.

Caps on lending rates and floors on deposit rates are the most frequent types of IRCs. Most of the countries imposing IRCs have ceilings on lending rates (Table 2). This is because this category includes both usury laws as well as more stringent limits on lending such as hard caps on loans to a particular sector. Roughly half of both high income and low and middle income countries surveyed provided a positive answer to the question of whether lending caps were in place.¹¹ Lending rate ceilings typically apply to commercial banks and

often to microfinance institutions. Floors on deposit interest rates are also commonplace, especially within low and middle income countries, where 28 percent of the countries in our sample have such limits (in contrast to only 16 percent of high income countries).¹² As expected, floors on deposit rates apply typically to commercial banks. As for other restriction types, some countries placed caps on deposit rates, while one country (Mauritania) reported to have a floor on lending rates.

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TABLE 2 - Number of Countries with IRCs by Regulated Institution and Restriction Type

INSTITUTION TYPE / LEVEL OF INCOME	CONTRACTUAL LENDING RATES		CONTRACTUAL DEPOSIT RATES	
	CEILING	FLOOR	CEILING	FLOOR
Commercial banks	47	1	9	25
Cooperative banks	29	-	7	5
Savings banks	20	-	5	4
Financing companies	29	-	6	2
Microfinance institutions	36	1	3	12
High Income Countries	22	-	3	7
Low & Middle Income Countries	29	1	8	18

11. While 50 percent of high-income countries have caps on lending rates, 45 percent of low and middle income have similar schemes. There is no statically significant difference between these two groups.

12. The difference is statistically different at 10 percent (one-tail).

Limits on lending rates are usually imposed across all business and retail lending products in both high income and low and middle income economies. While there are countries such as Ecuador that impose ceilings on lending rates on all loan categories (Box 3), it is very common for countries to regulate only all business or all retail loan products (Table 3). Among retail products, regulation typically focuses on consumer loans and microcredit, though high income countries have more breadth in terms of specific products, including credit cards and residential real estate loans. In the case of deposit rate regulation, we observe almost as many countries with product-specific regulation (15) as those with all-encompassing restrictions (17). This is due to the relative importance of floors on savings deposit rates, while other product types such as checking accounts and term deposits receive less attention from regulators. An interesting experience is that of the United States, which have an IRC system in place where most of the states regulate a maximum lending rate on payday loans while at the federal level the Federal Deposit Insurance Corporation enforces a ceiling on deposit rates for supervised institutions that are “less than well capitalized” (Box 4).

Consumer protection concerns were cited as the main intended reason for the introduction of IRCs. Four out of five countries with IRCs pointed to consumer protection as a

key reason to regulate interest rates (Figure 2). The typical case of such a country involved regulations that put a ceiling on loan rates (92 percent of those that invoked consumer protection) while, though also prevalent, it was less common in countries that implemented floors on deposit rates (64 percent of these opted for this reason). Financial stability was also a driving factor for many countries, with one-third of those with IRCs appealing to it. This reason was especially popular (64 percent) among those economies that set a ceiling on deposits interest rates, including France, Brazil and Sri Lanka, among others, with some invoking moral hazard of weaker institutions and others pointing to the instability of interbank markets ultimately affecting retail rates and hindering the transmission of monetary policy. As for the less cited reasons of resource allocation (9 percent) and competition (5 percent), these were more invoked by countries with deposit rate caps (at 36 and 18 percent, respectively). Other reasons, such as financial inclusion (members of the West African Economic and Monetary Union, WAEMU) or strengthening the monetary policy transmission channels (Pakistan) were cited by a significant share (40 percent) of countries setting a floor on deposit interest rates. Countries with no IRCs were asked to provide reasons for not using this tool, and their answers highlighted mainly the need to maintain competition in the banking markets, followed by preserving financial stability and efficiency of resource allocation.

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TABLE 3 - Number of Countries with IRC by Product Type

	ALL BUSINESS LOANS	SOME BUSINESS LOANS	ALL RETAIL LOANS	SOME RETAIL LOANS	ALL DEPOSITS	SOME DEPOSITS
East Asia & Pacific	1	1	1	3	0	2
Europe & Central Asia	12	0	15	7	3	1
Middle East & N. Africa	2	0	2	0	1	0
North & South America	6	2	6	5	3	9
South Asia	0	0	0	1	1	2
Sub-Saharan Africa	9	0	10	0	9	1
High Income	12	0	14	8	3	5
Low & Middle Income	18	3	20	8	14	10

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BOX 3. IRCS IN ECUADOR

IRCs in Ecuador were introduced in 2000, when the country adopted the US dollar as legal tender. First, there were limits to the maximum lending rates based on the London Interbank Offered Rate (LIBOR), augmented by a spread considering country risk and a 4 percent operating margin. Subsequently, in 2007 the authorities introduced absolute interest rate ceilings on four credit portfolios while prohibiting the charging of fees and commissions. Since then, the number of credit segments affected by the caps has increased to the current 19, with 22 administered interest rates ceilings. Interest rates caps vary by sub-segment yet it is not clear whether variation by credit grouping reflects appropriately the underlying risk and the transaction costs involved in each segment. For three microcredit segments there is a differentiation in the ceilings depending on the type of credit institution providing the loan. Finally, except for microcredits and priority consumer loans, which have seen their interest rate caps revised in 2018, lending rate ceilings have not changed during the past five years.

While the majority of legal limits on lending rates are based on primary legislation, the basis for restrictions on deposit rates, both floors and ceilings, are evenly split between primary legislation and administrative regulation. Three out of four countries imposing ceilings on lending rates, including all high income economies, did it through a law, with many of these being statutory laws or special legislation. In some cases, such as Paraguay, the authority to regulate interest rates beyond the conduct of monetary policy is incorporated into the central bank articles. Other countries have special laws, which can take the form of specific anti-usury laws, such as those in El Salvador, Italy or Uruguay, or could be part of a more general consumer protection act, such as the ones enacted in Finland, Korea (Republic of) or San Marino. Restrictions on deposit rates additionally rely on administrative regulation, which typically takes the form of central bank directives. For example, the deposit rate floor prevalent in WAEMU countries is based on a decree of the Council of Ministers and the Board of the Central Bank of West African States. Finally, one notable exception where the basis of IRC regulation is a court ruling is the British dependency of Guernsey, where part of the legal system is based on customary law.

Fixed or absolute limits are the typical methodology employed for setting IRCs, regardless of the restriction type. The methodology for determining the level at which interest rates are limited is a critical feature of the interest rate regime. Countries that set a fixed maximum (or minimum) rate introduce an additional rigidity that makes them less responsive to changes in the macroeconomic environment. However, relative rate limits come in different flavors, ranging from those set relative to a benchmark market rate to others set as a spread over an administrative rate, with discretion for the government to determine the latter (turning many of these into quasi-fixed frameworks). Rates set relative to central banks' policy rates deserve a separate mention, as they introduce some flexibility at the cost of distorting the monetary transmission channels, as it became manifest in Kenya's failed attempt to control interest rates (Box 2). Figure 3 shows that countries that decide to impose IRCs often choose a hard ceiling (or floor). However, some countries opt for flexibility when imposing caps on rates. Surprisingly, data on lending rate ceilings show that low and middle income economies are as likely as their high income peers to choose a benchmark market rate (both at 27 percent of those with IRCs). As far as caps on deposit rates are concerned, only Sri Lanka and the United States have set their maximum rate relative to a market

rate, while Belgium and Morocco set theirs in relation to their central bank policy rate.

IRCs are typically applied to deposits and loans denominated in local currency. In the case of deposit rate floors, all but one country (Belgium, where a floor is set for rates on deposits denominated in any currency) have their regulation applying to deposits in local currency, which may resonate with the (often implicit) objective of ensuring a minimum return to the domestic retail depositor (Figure 4). On the other hand, one third of countries with lending rate caps impose these on loans denominated in all currencies, though differences appear across income levels: while 45 percent of the high income economies that impose lending ceilings are in this group, only 24 percent of low and middle income countries do so. As an example of the former, the lending rate ceiling imposed by the National Credit Code on consumer

loans, credit cards and microcredit in Australia is applicable regardless of the currency denomination.

Almost half of the countries sanction breaches to IRCs through administrative penalties, which are typically enforced by the banking supervisor. There are differences at the income level though, with 57 percent of low and middle income economies opting for this option, while high income economies show split results among administrative sanctions (35 percent), criminal sanctions, normally associated with usury laws (35 percent), and automatic substitution of contractual provisions (27 percent). Interestingly, the majority of common law countries (69 percent) resort to criminal law, mainly due to the Eastern Caribbean Currency Union members (ECCU) members enforcing the Eastern Caribbean Central Bank Agreement, which sets a floor on deposit rates.

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BOX 3. IRCS IN THE UNITED STATES OF AMERICA

The US administer a system of interest rate caps on payday loans and on all kind of deposits under certain circumstances. Payday loans are unsecured short-term loans, typically carrying a high interest rate with a maturity of about two weeks. The prospective borrower writes a check for the full amount (principal plus interest and fees) and post-dated for the maturity date of the loan. The lender cashes the check on the loan due date, unless the borrower rolls over the loan for an additional fee. Approximately twelve million US residents use payday loans at least once per year (Dasgupta and Mason, 2019). With the exponential growth of payday lenders since the mid-90s and the detected predatory behavior in some cases, a number of state legislatures (but not all) have responded by enacting various restrictions on payday lending, ranging from limiting the number of rollovers to capping the annual percentage rate, typically at 36 percent. At the federal level, unsecured loans to military members are also capped. The US also have an interesting IRC regime that applies to all deposit products under exceptional circumstances. The Federal Deposit Insurance Act, Section 29, enacted in 1950 provides for interest rate restrictions on deposits applicable to regulated intermediaries based on their capital adequacy. The rule, which is grounded in safety and soundness reasons and was last revised in 2009, imposes a cap on interest rates on deposit products for various maturities and sizes offered by “less than well capitalized institutions”. The cap is set at 75 basis points calculated on a national reference rate, which is the average of the rates paid by financial institutions for the specific type of deposit, published on a weekly basis. The FDIC has recently submitted for comments a proposal for a new methodology for the interest rate restrictions.

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FIGURE 3. IRC Methodology: Absolute vs Relative

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FIGURE 4. IRC Currency Denomination

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FIGURE 5. IRC Basis of Regulation

* High Income Countries

** Low & Middle Income Countries

● Administrative Regulation ● Primary Law ● Court Ruling

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FIGURE 6 - Countries with IRC, Restriction on Fees

* High Income Countries

** Low & Middle Income Countries

● Fees Restrictions ● No Additional Restrictions

Characterizing the Data

A. Are IRCs Binding?

The presence of IRCs is a necessary yet not sufficient condition for legal restrictions to be binding, that is, to lead to out of equilibrium interest rates. The mainly legal aspects of IRCs presented in the previous section are important per se, being particularly useful for policy makers, researchers and market participants interested in comparing specific features of a country's IRC regime with those in other countries. However, the economics of IRCs are equally important. In this context, it is of special interest attempting to assess whether IRCs are binding. This happens when caps (floors) on lending rates are below (above) the market rates, that is interest rates based on the market forces of demand and supply, and when caps (floors) on deposit rates are set at a level below (above) market rates. In these circumstances, regardless of the intended objectives, IRCs can have nontrivial consequences for savings and investment and, ultimately, for welfare, as discussed in section I.

Assessing the bindingness of IRCs is not an easy task. There is no well-established methodology to judge whether the prevailing level and structure of interest rates is out of equilibrium. For one, when IRCs are in place we may not be able to observe market rates directly. Actual rates are not an accurate indicator of market rates where IRCs are in fact binding, since the actual rates reflect the influence of the cap or of the floor. The multiplicity of IRCs is another complication. As shown in the previous section, often countries set different caps or floors for different banking products, providing rational financial institutions with room for regulatory arbitrage so that they can borrow where they can pay below market rates and lend where they can obtain market rates. In principle, one would expect that under competitive conditions the expected real interest rates on savings instruments is positive, else there would be a strong tendency to substitute hoarding of cash, goods and self-investment for financial savings. Yet occasionally, in the presence of volatile inflation, real interest rates in an economy can be negative even when rates are free and competitively determined.¹³ Finally, international comparisons with similar countries and markets may provide useful indications on interest rate levels, yet differences in regulations and other country characteristics may be difficult to isolate.

13. A similar argument can be made in the context of very low policy rates and unconventional monetary policy.

We measure the bindingness of IRCs that apply to commercial banks by taking the difference between the legal limits and the actual interest rates. The gap, expressed in percentage points and in real terms, between the *de jure* limit, as reported by the country authorities in our survey, and the observed actual average interest rate charged or paid by commercial banks in a country provides a preliminary indication of the degree of bindingness of IRCs and therefore of interest rate repression.¹⁴ The lower the gap between the regulatory limit and the interest rate for caps on deposit and lending rates, the higher the degree of bindingness of IRCs. A gap of zero may indicate full bindingness. For floors on deposit rates, the higher the gap between the interest rate paid by lenders and the regulatory minimum, the more binding is the IRC. Where multiple legal limits exist, we calculate our gap measure for the most representative product-level IRC that apply to commercial banks in a country. For example, Colombia reported legal (usury) limits for all commercial bank lending products and interest rate ceilings for rural lending products. In our framework, we use the former only given its broader coverage. Accordingly, we use the relevant market rate to calculate the gap. In our example, we use the weighted average of commercial bank lending rates to measure the gap with the legal ceiling. For countries that, for example, reported *de jure* controls on credit card rates, we use the market credit card rate to calculate the gap. We acknowledge that it would be ideal to focus on products and maturities rather than institutions yet data constraints in our cross-country setting limits the feasibility of this option.

Our gap measure of IRC bindingness is not without shortcomings. The most important limitation is that we lack a longitudinal dimension in our data as we only collected information on IRCs as of 2019. Ideally one would observe over time the evolution of the gap between IRCs and actual rates to draw more general conclusions about the degree of IRC bindingness. Future research at the county level could fill this gap. Another shortcoming of our approach is that the convergence of the actual interest rates towards the caps on lending rates and the floors on deposit rates may be symptomatic of low competition rather than reflect the bindingness of IRCs. In an oligopolistic market with inelastic demand, the presence of a legal limit may serve as a focal point for tacit collusion. However, this behavior may arise only in the case of fixed rate limits or in the case of flexible rate limits which are tied to a specific external reference rate, such as an interest rate decided on by the central bank. In contrast, reference rates which are endogenously determined

such as observed average interest rates of previous periods respond to the price setting behavior of lenders so that even during one period interest rates converge towards an existing limit, the next period's limit will be higher or lower. As a result, there cannot be focal point for collusion in the long run. In any event, whether focal points happen in practice in the presence of IRCs is an empirical issue.

Gaps between lending ceilings and actual rates offered a diverse landscape. Table 4 presents legal limits and actual rates as well as the gap measure for the representative market segment in 2019 for the 47 economies that reported interest rate caps for commercial banks. It portrays a very heterogenous map, with the large majority of countries showing a relatively large gap between the cap and the actual rates. Only five countries (Argentina, Bolivia, Marshall Islands, Mauritania and Vietnam) exhibit a zero gap, and in two economies (France and Ecuador) the gap is within 150 basis points. Countries at the top of our bindingness ranking include a majority of middle income economies, with a regional predominance of Latin American economies. Interestingly, the large majority of countries where our gap measure is narrowest adopt a fixed or absolute cap. While this approach in principle entails a high degree of rigidity for the IRC regime, judging from the overall distribution in Table 5 we cannot point to the conclusion that fixed limits are in fact more binding than relative or flexible limits.

Gaps for commercial bank deposit rates are generally narrow in the nine countries that reported the presence of IRCs in these markets. As described in the previous section, legal limits on deposit rates are largely concentrated in savings accounts. For example, France imposes a cap on the “Livret A”, a popular tax-free savings account available to all individuals in the country. Table 5 shows legal limits, actual rates and the gap measure for the nine economies that impose ceilings on deposit rates. In three countries (Mauritania, Morocco and Vietnam) the real gap between the legal limits and the actual deposit rates is zero, while in other three economies (France, Ecuador and the US) the gap is within 100 basis points of the respective limit. The method used to determine the ceiling in these four countries is either fixed or relative to a non-market reference rate. Interestingly, Table 6 also shows that actual real rates are negative in four economies (Belgium, France and US) where monetary policy is likely to play a role, and in one country (Brazil), where the presence of a negative real floor (see below) in addition to the cap in a highly oligopolistic market may act as a focal point.

14. While most of the countries provided accurate references to the level at which floors and ceilings were set, their responses in terms of actual market rates were much more limited. As a complement to the survey, we therefore collected market rate information from the IMF's International Financial Statistics and central banks' webpages.

TABLE 4. Lending Rate Ceilings, Commercial Banks

COUNTRY	NOMINAL		REAL		GAP	TYPE OF LIMIT	PRODUCT REGULATED
	CEILING	ACTUAL RATE	CEILING	ACTUAL RATE			
Argentina	55.00	55.00	0.95	0.95	0.00	Absolute	Retail (credit card)
Vietnam	6.00	6.00	3.12	3.12	0.00	Absolute	Business (real estate, agriculture)
Bolivia	11.50	11.50	9.49	9.49	0.00	Absolute	Retail (real estate, small business, micro), Business (working capital, term, agriculture)
Mauritania	14.50	14.50	11.93	11.93	0.00	Relative: Adm. rate	All retail/business loans
Marshall Isl.	15.00	15.00	14.36	14.36	0.00	Absolute	Retail (consumer loans)
France	4.47	3.36	3.33	2.23	1.10	Relative: Market Rate	All retail/business loans
Ecuador	9.83	8.58	9.54	8.29	1.25	Absolute	All retail/business loans
Russia	11.67	8.75	6.89	4.10	2.79	Relative: Market Rate	Retail (consumer, credit card, micro)
Spain	7.50	4.20	6.75	3.48	3.28	Relative: Adm. rate	Retail (consumer, real estate)
Croatia	6.93	2.69	6.11	1.90	4.21	Relative: Market Rate	All retail loans
Italy	8.71	3.76	8.04	3.13	4.91	Relative: Market Rate	All retail/business loans
N.Macedonia	10.50	5.21	9.66	4.41	5.25	Relative: Adm. rate	All retail/business loans
Portugal	13.60	7.30	13.22	6.94	6.28	Relative: Adm. rate	All retail/business loans
Guernsey	10.00	3.65	7.80	1.57	6.22	Absolute	All retail loans
San Marino	15.95	9.55	14.86	8.52	6.34	Absolute	All retail/business loans
Chile	19.23	12.82	16.26	10.01	6.25	Relative: Market Rate	All retail/business loans
Morocco	13.57	6.50	13.35	6.29	7.06	Relative: Market Rate	All retail/business loans
Germany	14.26	7.13	12.64	5.60	7.03	Relative: Market Rate	All retail/business loans
Burkina Faso	15.00	6.81	18.84	10.38	8.46	Absolute	All retail/business loans
Niger	15.00	6.81	17.94	9.54	8.40	Absolute	All retail/business loans
Mali	15.00	6.81	16.94	8.61	8.33	Absolute	All retail/business loans
Côte D'Ivoire	15.00	6.81	16.29	8.01	8.28	Absolute	All retail/business loans
Benin	15.00	6.81	15.96	7.70	8.26	Absolute	All retail/business loans
Guinea-Bissau	15.00	6.81	14.72	6.55	8.17	Absolute	All retail/business loans
Togo	15.00	6.81	14.23	6.09	8.14	Absolute	All retail/business loans
Senegal	15.00	6.81	13.01	4.96	8.05	Absolute	All retail/business loans
Belgium	10.00	1.70	8.44	0.26	8.18	Absolute	Retail (consumer, real estate), All business loans
Netherlands	14.00	4.99	11.07	2.29	8.78	Relative: Adm. rate	All retail/business loans
South Africa	20.64	10.14	15.86	5.77	10.08	Relative: Market Rate	All retail loans
Armenia	24.00	13.12	22.24	11.51	10.73	Relative: Policy Rate	All retail/business loans
Israel	15.25	3.48	14.29	2.62	11.67	Relative: Policy Rate	All retail/business loans
Finland	20.00	6.33	18.78	5.25	13.53	Absolute	Retail (consumer, credit card)
Kyrgyz Rep.	34.99	18.94	33.47	17.61	15.87	Relative: Market Rate	All retail/business loans
El Salvador	24.28	8.03	24.19	7.95	16.24	Relative: Market Rate	All retail/business loans
Colombia	28.98	10.38	24.59	6.62	17.97	Relative: Market Rate	All retail/business loans
Paraguay	37.81	18.08	34.11	14.91	19.20	Relative: Market Rate	All retail/business loans
Korea	24.00	3.40	23.53	3.01	20.52	Absolute	All retail/business loans
United States	31.00	10.32	28.67	8.35	20.31	Absolute	Retail (consumer, small business, micro)
Thailand	28.00	4.08	27.10	3.35	23.75	Absolute	Retail (consumer, credit card, micro)
Uzbekistan	50.00	23.61	30.93	7.89	23.03	Absolute	Retail (small business, micro)
Sweden	40.00	6.00	37.55	4.14	33.40	Relative: Policy Rate	Retail (consumer, micro)
Uruguay	50.00	11.56	39.04	3.41	35.63	Relative: Market Rate	All retail/business loans
Georgia	50.00	10.82	43.06	5.69	37.37	Absolute	All retail/business loans
Bulgaria	50.00	9.93	45.48	6.62	38.86	Relative: Adm. rate	All retail loans
Lithuania	75.00	2.20	71.01	-0.13	71.14	Absolute	Retail (consumer, credit card, real estate)
Latvia	107.36	17.28	101.69	14.07	87.61	Absolute	All retail loans

* Brazil, which has a lending cap for commercial banks, was excluded due to the limited applicability of IRC to loans under Sistema Financeiro da Habitação (SFH).

Actual deposit rates paid by commercial banks unsurprisingly show a general convergence towards floors. Table 6 presents the real gaps between the actual interest rates paid by commercial banks and the legal limits, used as a proxy for determining the degree of bindingness of floors on deposit rates. It shows that in 2019 in all but one country the real gap was within 100 basis points of the respective limit. In six economies (Brazil, Bolivia, Pakistan, Mauritania, Montserrat and Belgium) the gap is zero or close to zero. All but two countries reporting deposit rate floors determine the legal limit using a fixed rate. Interestingly, the two economies (Bolivia and Brazil) that adopt a relative (to

the policy rate) approach are among those where the gap is zero. On the other hand, a few economies had negative real deposit floors (and actual rates) in 2019. Again, these are mostly eurozone economies (Belgium, France and Portugal) where monetary policy greatly constrains the level of rates, in addition to Brazil, discussed above, and Ethiopia, where interest rate repression is embedded in the country's framework for managing its monetary and foreign exchange policy (Chauffour and Gobezie, 2019). One country, Malaysia, shows a negative real floor though the actual rate paid was positive.

TABLE 5. Deposit Rate Ceilings, Commercial Banks

COUNTRY	NOMINAL		REAL		GAP	TYPE OF LIMIT	PRODUCT REGULATED
	CEILING	ACTUAL RATE	CEILING	ACTUAL RATE			
Morocco	1.94	1.94	1.74	1.74	0.00	Relative: Policy Rate	All deposits
Vietnam	5.00	5.00	2.14	2.14	0.00	Absolute	Certificates of deposits
Mauritania	4.70	4.70	2.35	2.35	0.00	Relative: Administrative rate	All deposits
France	0.75	0.50	-0.35	-0.60	0.25	Absolute	All deposits
Ecuador	1.50	1.05	1.23	0.78	0.45	Absolute	All deposits
United States	1.38	0.63	-0.42	-1.16	0.74	Relative: Market Rate	Savings, checking and money market accounts, CDs up to 60 months
Belgium	3.00	0.14	1.54	-1.28	2.82	Relative: Policy Rate	Savings accounts
Brazil	6.17	3.15	2.35	-0.56	2.91	Absolute	Savings accounts, Others
North Macedonia	10.50	1.87	9.66	1.10	8.56	Relative: Adm. Rate	All deposits

TABLE 6. Deposit Rate Floors, Commercial Banks

COUNTRY	NOMINAL		REAL		GAP	TYPE OF LIMIT	PRODUCT REGULATED
	CEILING	ACTUAL RATE	CEILING	ACTUAL RATE			
Brazil	3.15	3.15	-0.56	-0.56	0.00	Relative: Policy Rate	Savings accounts, Others
Bolivia	2.00	2.00	0.16	0.16	0.00	Absolute	Savings accounts, Term (CD)
Pakistan	11.25	11.25	0.61	0.61	0.00	Relative: Policy Rate	Savings, Checking accounts
Mauritania	4.70	4.70	2.35	2.35	0.00	Relative: Adm. Rate	All deposits
Montserrat	2.00	2.01	3.10	3.11	0.01	Absolute	Savings accounts
Belgium	0.11	0.14	-1.31	-1.28	0.03	Absolute	Savings accounts
Portugal	0.00	0.11	-0.34	-0.23	0.11	Absolute	All deposits
Dominica	2.00	2.12	0.48	0.60	0.12	Absolute	Savings accounts
Antigua And Barbuda	2.00	2.16	0.52	0.68	0.16	Absolute	Savings accounts
Grenada	2.00	2.20	1.39	1.59	0.20	Absolute	Savings accounts
St. Vincent And The Grenadines	2.00	2.29	1.08	1.37	0.29	Absolute	Savings accounts
St Kitts And Nevis	2.00	2.36	0.39	0.74	0.35	Absolute	Savings accounts
St. Lucia	2.00	2.36	1.28	1.64	0.36	Absolute	Savings accounts
Senegal	3.50	4.00	1.71	2.20	0.49	Absolute	All deposits
Malaysia	0.25	1.01	-0.41	0.35	0.76	Absolute	Savings accounts
Togo	3.50	4.32	2.81	3.62	0.81	Absolute	All deposits
Guinea-Bissau	3.50	4.32	3.24	4.06	0.81	Absolute	All deposits
Benin	3.50	4.32	4.36	5.18	0.82	Absolute	All deposits
Mali	3.50	4.32	5.25	6.08	0.83	Absolute	All deposits
Niger	3.50	4.32	6.14	6.98	0.84	Absolute	All deposits
Burkina Faso	3.50	4.32	6.96	7.80	0.84	Absolute	All deposits
France	0.00	0.98	-1.10	-0.12	0.97	Absolute	All deposits
Anguilla	2.00	2.99	1.17	2.15	0.98	Absolute	Savings accounts
Ethiopia	7.00	8.00	-7.62	-6.76	0.86	Absolute	Savings accounts, Term (CD)
Côte D'Ivoire	3.50	4.64	4.66	5.81	1.15	Absolute	All deposits

B. Are IRCs Part of a Broader Financial Repression Policy Toolkit?

IRCs have been historically part of a wider financial repression policy toolkit. IRCs have often been one among many financial repression policies, including government ownership or control of banks, controls on cross-border capital flows, restrictions on entry in the banking market, and excessively high bank reserve requirements. To check whether interest rate repression is in fact more pervasive in countries which adopt other financial repression policies, we calculate the pairwise correlation coefficients between our measure of IRC bindingness for lending ceilings and the following proxies for financial repression policies:^{15, 16}

- **State ownership of banks:** Ownership of banks is the most direct form of control a government can have over credit allocation. State ownership can be the result of nationalization following a banking crisis (e.g., Mexico in 1982, Indonesia in 1998 or more recently many advanced economies in the context of the GFC) but more often is the result of a conscious policy decision by the authorities (e.g., in India beginning in 1969). We proxy this variable by the share of the banking system's assets controlled by the government, where control is defined when the government owns 50 percent or more equity. We use Anginer et al. (2019), which provides the latest figure for 2016.¹⁷ We expect a negative association between our measure of interest rate repression and the share of state ownership of banks, that is the lower the gap between the legal limits and the actual interest rates, the higher should be state ownership of banks.
- **Capital account restrictions:** Restrictions on international financial transactions are often imposed to give the government greater control over the flow of credit within the economy, as well as greater control over the exchange rate. These restrictions can take various forms, from transactions taxes to outright restrictions on inflows and/or outflows. We measure the extent of capital account restrictions by the widely used Chinn-Ito index. This is an index measuring a country's degree of capital account openness initially introduced by Chinn and Ito (2006) and updated frequently.¹⁸ The index is based on the tabulation of restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions. It is therefore a measure of *de jure* restrictions. We take the latest available value of the series, which is available up to 2017. Given that higher values of the Chinn-Ito index imply greater capital account openness, we expect a positive association with our measure of interest rate repression.

15. While an important financial repression measure used in many jurisdictions, we do not include lending quotas that, to the best of our knowledge, are not systematically tracked and cannot be meaningfully proxied by a quantitative variable.

16. We did not calculate correlation coefficients for deposit IRCs due to the low number of observations. There are only 9 countries with deposit rate ceilings, and while there are 25 countries with deposit floors, 8 of them are ECCU members and 8 economies are WAEMU members.

17. Available at <https://datacatalog.worldbank.org/dataset/bank-regulation-and-supervision-survey#tab2>.

18. Available at http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

- **Entry barriers:** To maintain control over credit allocation, governments may restrict the entry into the financial system of new domestic banks or of other potential competitors, for example foreign banks or non-bank financial institutions. Entry barriers may take several forms, including outright restrictions on foreign banks; bank activity restrictions; or excessively restrictive licensing requirements. We proxy entry barriers by an index of legal requirements needed to obtain a banking license. This indicator, first developed by Barth et al. (2001), can be calculated using data systematically collected by the World Bank as a part of the Bank Regulation and Supervision Survey. We use the latest available data (World Bank, 2019) and expect a negative association with our measure of interest rate repression, given that a higher value of the index of legal requirements indicates greater entry barriers.
- **Excessive reserve requirements:** Governments may impose excessively high reserve requirements, beyond what can be reasonably expected for prudential purposes, and reserves may not be remunerated at market rates of return. Excessive reserve requirements are not directly observable, however. We measure reserve requirements using the Reserve Requirement Dataset (Federico et al., 2014), who provide a database of various reserve requirements (by type of currency, products, etc.) for 65 countries updated to 2019. We take the average of reserve requirements, which are expressed as a percentage of the instrument targeted. We expect that higher values of reserve requirements are positively associated with higher interest rate repression hence we expect a negative sign on the coefficients of correlation.

Pairwise correlations confirm that IRCs may in fact be a component of a wider financial repression policy toolkit. Table 7 presents the pairwise correlation coefficients among the gap between actual lending rates and legal ceilings, our bindingness measure for lending rate caps, and our proxies for other common financial repression policies along with their statistical significance. Pairwise correlations suggest that the relative bindingness of lending ceilings is associated with a higher share of state-owned commercial banks, which governments can use to direct credit, and more stringent *de jure* capital controls, which can be used to influence size and composition of capital flows. Correlations become stronger, including for other proxies of financial repression (albeit not significant), when lending ceilings that are determined relative to a market benchmark are excluded from the sample.

> > >

TABLE 7. Correlation Between Lending IRC Bindingness and Other Financial Repression Policies

COUNTRY	FULL SAMPLE		EXCL. RELATIVE (MKT) CEILINGS	
	Q	N	Q	N
State ownership of banks	-0.284*	42	-0.393**	31
Capital account restrictions	0.305**	45	0.377**	33
Entry into banking requirements	0.002	42	0.032	30
Excessive reserve requirements	-0.082	19	-0.403	12

Significance at ***1%, **5% and *10%.

FIGURE 7. Lending IRC Bindingness and Other Financial Repression Policies

Policy Discussion

This section discusses the key contours of an interest rate management policy to move from fixed to market-determined interest rates when these are not appropriate. The previous sections have presented and discussed *de jure* IRCs in lending and deposit markets and provided some preliminary evidence on the degree of bindingness of controls. However, a more detailed country-level assessment would be needed to determine whether level and structure of interest rates in a country are appropriate in the presence of IRCs. Should the prevailing level and structure of interest rates in the country not be appropriate, an interest rate management policy would be desirable to minimize the adverse side effects to the economy they create while laying down the basis for a careful transition to market-determined interest rates. Important guiding principles of an interest rate management policy should be (i) transparency, to ensure that IRCs are known and understood by market participants so that opportunities for arbitrage are minimized, and (ii) flexibility, to ensure that changes in the underlying economic and structural conditions are transmitted to interest rates changes.

The first step should be an assessment of the adequacy of current interest rate levels and structure. This is not an easy task, especially because there is no well-established methodology. A simple approach would be to decompose the bank interest rate spread by credit and deposit segment over time to identify the relative importance of the factors driving intermediation spreads. Under competitive conditions, the spread between lending rates and the average cost of loanable funds should be just enough to cover operating costs and credit risk while yielding “normal” profits (see, for example, Ferrari et al., 2018). Calculating average costs of funding augmented for statutory reserve requirements and corporate taxes would provide a natural floor to lending rates, while an analysis of the other components that determine the lending rate would contribute to shed light on areas where the authorities could direct efforts to improve the interest rate structure.

If the country’s interest rate regime is inappropriate and distortive, an interest rate management policy may be necessary until conditions for a smooth liberalization obtain.

Such a policy, which would introduce transparency and flexibility to interest rate management, can take various forms but should include, at a minimum, the following elements:

- **Objective of IRCs.** It is important to explicitly outline the intended objective of IRCs to ensure accountability and proper monitoring. The objective of IRCs could be to protect consumers from usury, encourage more efficient and prudent pricing of financing products, and/or promote greater transparency. Investment promotion and financial inclusion are typically better served by other policies.
- **Applicability and scope.** A second essential building block of an interest rate management policy concerns the financial institutions, products and interest rates that are subject to controls. Commercial banks and other lenders should be ideally subject to the same restrictions to avoid distortions and regulatory arbitrage. To minimize the difficulties of establishing an appropriate interest rate structure, it would also be important to minimize the number of administered interest rates. This would also have the advantage to facilitate the management of the interest rate regime. Often, selective credit policies directed to designated sectors under more favorable conditions artificially create new interest rate categories. To the extent that this is true, the authorities could streamline these policies to reduce the number of interest rates. Finally, to minimize arbitrage opportunities and increase transparency, it would be important that the framework applies to the effective interest rates, that is the nominal interest rates augmented with fees and commissions and any compounding of interest that may come with the financial products.
- **Methodology.** This is the most critical component of the interest rate management policy and its calibration should be informed by the adequacy assessment discussed above. In general, there are two broad criteria for setting IRCs. The first is to set absolute IRCs, where the maximum or minimum interest rate is fixed. This can be a single cap or floor applicable across the board or be different by product. The advantage of absolute IRCs is their simplicity. However, once they are set fixed IRCs tend to vary little over time and for these reasons they can quickly go out of equilibrium with underlying economic conditions and structural changes in the banking sector. The second approach is to establish relative IRCs, where the maximum or minimum level of interest rates is a fixed spread or a multiple of an underlying benchmark or reference rate. The latter is usually the central bank policy

rate or a market rate. In contrast to absolute IRCs, relative caps vary over time based on the movement of the benchmark rate but can be more complex to administer and can have unintended consequences. In countries where money markets are not sufficiently developed there may be no meaningful benchmark available, while the use of the central bank policy rate can complicate the conduct of monetary policy (see Alper et al., 2019). However, if the spread or multiple over the benchmark accounts for intermediation costs, credit risk and non-monopolistic profits the result under this approach could be an interest rate structure similar to equilibrium rates under competitive conditions. For these reasons, relative IRCs are to be preferred to absolute controls.

- **Disclosure.** An essential element of the interest rate management framework is the requirement that the methodology and the relevant parameters are transparently disclosed to the public. This would provide market participants with the notion of fairness, endorsing the view that any IRC is set in an objective manner.
- **Monitoring.** The impact of a the IRC framework should be monitored and assessed against the intended policy objective. This evaluation should be carried out considering the level of the caps and/or floors, the reaction of demand and supply, borrowers' and savers' characteristics, the degree of competition in the markets and the structure of the financial system.

The establishment of a robust and transparent interest rate framework should be complemented by reforms aimed at successfully establishing the institutional and market preconditions for a safe transition or return to market-determined interest rates. Though economic theory offers little support for these preconditions, international experience with interest rate deregulation provides some guidance on desirable economic prerequisites in both the real and the financial sector.¹⁹ While macroeconomic and price stability along with a healthy corporate sector are an important precondition for interest rate deregulation, reforms in the financial sector that establish the necessary institutional and market infrastructure while removing other government restrictions can go a long way in facilitating a smooth transition towards interest rate liberalization and optimal allocation of resources.

An essential first step is to develop money market instruments able to influence the marginal costs of funds of financial intermediaries. The establishment of a transparent interest rate framework would have to be

19. For a discussion on international experience with interest rate liberalization see, for example, Pereira Leite and Sundarajan (1990); Mehrann et al., (1996); and Hanson (2001).

accompanied by measures to establish a sound legal and regulatory framework for the development of the money and interbank markets. In the absence of well-developed markets, the authorities would have to develop and streamline primary issuances of government and central bank securities and rediscount mechanisms so that the associated yields can serve as the marginal cost of funds to banks. There may also be a need to strengthen the clearing and settlement system for payment transactions to support an active money market.

Prudential regulation and supervision need to ensure the resilience of the banking sector. A sound banking system is critical for the effectiveness of a new interest rate regime. The move from fixed to market-determined interest rates requires sound banks, with adequately developed monitoring and screening systems. Historical experience with interest rate liberalization shows the criticality of having a sound regulatory and supervisory framework to avoid volatility and instability. Without adequate prudential regulation and supervision, unexpected problems at individual financial institutions can morph into a systemic crisis following liberalization. Moreover, demand for credit can become inelastic to increases in interest rates if banks are overburdened by high nonperforming loans and have limited capital available to support new lending. For these reasons, the adequacy of bank regulation and supervision and reforms in these areas are critical for the effectiveness of interest rate liberalization.

The bank competition policy framework needs to ensure responsiveness to interest rate changes. To ensure adequate competition and avoid distortions in the level, structure and responsiveness of interest rates, interest rate reform may require regulatory and institutional changes in the competition policy framework. An oligopolistic market structure with limited contestability may reduce the effectiveness of market-determined interest rates. It would be important to review policies toward entry and exit, mergers, licensing, branching, activity restrictions, and portfolio regulations, among others. The institutional architecture for the conduct of competition policy in the banking sector and the attribution of tasks among the relevant authorities is also an important area to assess and reform, if any. However, the desirability of more competition in the banking market should always be weighed against the risks of financial instability.

Shortcomings in the contractual and information frameworks need to be addressed. A sound credit infrastructure, that is the set of laws and institutions that facilitate the use of collateral, ensure debt resolution and minimize information asymmetries, is a key building block of an efficient financial system. As such, it is instrumental to a system where financial institutions are able to price risk and determine a lending rate that compensates for all expenses while leaving a profit. Market-enabling policies such as

strengthening collateral registries, modernizing the secured transaction framework and the insolvency framework, and improving the credit information system could facilitate the transition to market-determined interest rates.

Distortive government interventions in credit markets need to be minimized. While some types of government interventions can contribute to improve the allocation of resources (e.g. partial credit guarantee schemes), other forms might cause resource misallocation. It is therefore important to isolate those policies that may generate distortions and address their shortcomings:

- **Bank financing of the government deficit at below market rates is often a major source of misallocation and crowding out of the private sector that can undermine the effectiveness of interest rate liberalization.** The reduction of the fiscal deficit along with essential reforms of the debt management framework can contribute to gradually set a (market-determined) floor for interest rates. An appropriate level and structure of interest rates can be established only if the government gradually reduces its budget deficit to a manageable level that can allow it to borrow from capital markets in competition with other borrowers without recourse to special regulations.
- **It is essential that state-owned banks (SOBs), another typically important source of distortions, are reformed, restructured, if needed, and repositioned to complement rather than substitute private lenders.** SOBs often provide subsidized credit to underserved segments of the population on the back of actual or perceived market failures. However, in many instances SOBs compete directly with private banks. It would be important that reforms focus on ensuring that SOBs continue to be justified by the existence and pervasiveness of market failures and adopt a sound corporate governance with a clear mandate and independent boards of directors, with transparent operations intermediated through the private financial sector to minimize interest rate distortions. A consolidation and streamlining of existing public credit policies would also help reduce interest rates and facilitate the liberalization process.
- **Finally, and related to the previous point is the importance to reform nonfinancial state-owned enterprises (SOEs) to gradually introduce a “hard” budget constraint, which in addition to limiting contingent fiscal liabilities for the government, would also induce SOEs to behave in an interest-sensitive fashion when borrowing from the banking system.**

Concluding Remarks

In this paper we present a new database on IRCs in 108 countries, which account for 88 percent of global GDP, and discuss the key pillars of an interest rate management policy. There are signs of a resurgence in financial repression policies around the world, which may be exacerbated by the Covid-19 crisis. While some measures may turn out to be temporary, others may become permanent. Understanding their unfolding is therefore important for policymakers concerned with minimizing the associated costs. This paper represents a step towards that goal. Building on a survey of financial sector authorities and bankers' associations conducted during 2019 in World Bank Group member countries, this paper documents a key form of financial repression: IRCs, including their origins, the legal framework and their intended objectives. The data collected through the survey are then used to provide a preliminary estimation of the degree of bindingness of IRCs and to calculate pairwise correlations with other financial repression policies. Should level and structure of interest rates in a country be inappropriate, an interest rate management policy may be necessary until conditions for deregulation obtain.

The key findings of this paper are the following:

- **IRCs are common in countries across different income levels and legal systems though some regional differences emerge.** A total of 63 countries out of 108 surveyed responded that they have IRCs in place. Both high income countries and low and middle income countries show a similar prevalence of IRCs. The share of countries with *de jure* IRCs also remains roughly unaltered when countries are divided according to their law system, though we observe a relatively higher prevalence of IRCs in common law countries. Geographically, IRCs tend to be more popular in regions such as South Asia, the Americas, and Sub Saharan Africa.
- **Caps on lending rates and floors on deposit rates are the most frequent types of IRCs.** Most of the countries imposing IRCs have ceiling on lending rates, regardless of the level of income. Lending rate ceilings typically apply to commercial banks and often to microfinance institutions. Floors on deposit interest rates are also commonplace, especially within low and middle income countries.
- **Limits on lending rates are usually imposed across all business and retail lending products in both high income and low and middle income economies.** In retail markets, IRCs typically focus on consumer loans and microcredit, though high income countries have more breadth in terms of specific products, including credit cards and residential real estate loans. In the case of deposit rate regulation, we observe almost as many countries with product-specific regulation as those with all-encompassing restrictions.
- **Consumer protection concerns are the main stated reason for the introduction of IRCs, especially by those countries that imposed a ceiling on loan rates.** Financial stability is also a driving factor for many countries, especially among those setting a ceiling on deposits interest rates. Less cited reasons for introducing IRCs relate to resource allocation and competition, especially by countries with deposit rate caps. Other reasons such as financial inclusion or strengthening the monetary policy transmission channels are reported by countries setting a floor for deposit interest rates.
- **Fixed limits are the typical methodology employed for setting IRCs, which generally apply only to domestic currency denominated transactions and are accompanied by limits on fees.** However, some countries opt for flexibility when imposing caps on rates. IRCs are typically applied to transactions denominated in local currency, especially deposit rate floors. Half of the countries with IRCs also impose limits on fees. Restrictions on administrative and servicing fees aim to curtail the ability of financial intermediaries to increase the effective lending rate beyond the established ceiling or to decrease the effective deposit rate below the established floor. We find that limits on fees are mostly imposed in the context of lending rate ceilings. Finally, almost half of the countries with IRCs sanction breaches to IRCs through administrative penalties, which are typically enforced by the banking supervisor.
- **IRC bindingness in 2019 presented a diverse landscape.** Gaps between legal limits and actual lending rates in real terms, used as a proxy to preliminary estimate the degree of bindingness of IRCs, portray a very heterogenous map, with the large majority of countries showing a relatively large gap between the cap and the actual rates and only five countries exhibiting a gap of zero. Real gaps for commercial bank deposit rates are generally narrow in countries that reported the presence of IRCs in these markets, with only three countries showing a gap of zero. Actual deposit rates are negative in a few economies with deposit rate ceilings. Finally, actual deposit rates paid by commercial banks unsurprisingly show a general convergence towards floors, with a few economies showing negative real floors and actual rates.
- **The degree of bindingness of lending IRCs is associated with other financial repression policies.** Pairwise correlations suggest that the relative bindingness of real lending ceilings is associated with a higher share of state-owned commercial banks, which governments can use to direct credit, and more stringent *de jure* capital controls, which can be used to influence size and composition of capital flows. Correlations become stronger, including for other proxies of financial repression, when lending ceilings that are determined relative to a market benchmark are excluded from the sample.

In the presence of IRCs, country authorities should assess the appropriateness of prevailing interest rate levels and structure and, should IRCs be binding, consider the introduction of an interest rate management policy. The presence of IRCs is a necessary but not sufficient conditions for interest rate restrictions to be binding, that is, to have welfare implications. It is, therefore important to assess the adequacy of current interest rate level and structure. In the absence of a well-established methodology, this paper suggests an accounting decomposition of bank interest rates over time. If the country's interest rate regime is inappropriate and distortive, an interest rate management policy may be necessary until conditions for a smooth liberalization obtain. Important guiding principles of an interest rate management policy should be (i) transparency, to ensure that IRCs are known and understood by market participants so that opportunities for arbitrage are minimized, and (ii) flexibility, to ensure that changes in the underlying economic and structural conditions are transmitted to interest rates changes.

Complementary reforms would be needed to lay down the foundations for a smooth interest rate deregulation. The establishment of a robust and transparent interest rate framework should be complemented by reforms aimed at successfully establishing the institutional and market preconditions for a safe transition or return to market-determined interest rates. While interventions would have to be calibrated at the country level, considering the initial level of institutional and market development, this paper discusses a blueprint for financial reform based on international experience with interest rate liberalization. An essential first step would be to develop money market instruments able to influence the marginal costs of funds of financial

intermediaries. Prudential regulation and supervision should be strengthened to ensure the resilience of the banking sector. The bank competition policy framework would need to be assessed and if needed strengthened to ensure market responsiveness to interest rate changes. Shortcomings in the contractual and information frameworks should be addressed. Finally, distortive government interventions in credit markets would have to be minimized.

Further research is needed to advance knowledge on IRCs and investigate their effects on welfare. The hope is that our database on IRCs can contribute to generate renewed interest and additional research on the topic, which can help provide concrete policy prescriptions. It would be important to complement our effort with country level analysis at the bank-product level over time to ascertain whether legal limits to interest rates in a country are in fact binding and what are the welfare implications. In this context, it would also be important to include de facto IRCs in the analysis, especially those introduced by subsidized government programs. It would also be interesting to collect data on other forms of financial repression, especially lending quotas on which there is very limited knowledge, and investigate the interactions among various forms of financial repression. It is likely that IRCs in a country are part of a wider toolkit of financial repression policies, as we have preliminary shown in this paper, and interaction and complementarity of policies may have different welfare outcomes. Finally, given the prospect that IRCs might become an increasingly important feature of domestic financial systems in the post Covid-19 world, it would be important to closely monitor these developments.

5

References

Abiad, A., and A. Mody, 2005. "Financial Reform: What Shakes It? What Shapes It?" *American Economic Review*, 95 (1): 66-88.

Abiad, A., E. Detragiache, and T. Tressel, 2010. "A New Database of Financial Reforms," IMF Staff Papers.

Alper, C. E., B. Clements, N. Hobdari, and R. Moyà Porcel, 2019. "Do Interest Rate Controls Work? Evidence from Kenya," IMF Working Papers, WP/19/119.

Angkinand, A., W. Sawanggoenyuang, and C. Wihlborg, 2010. "Liberalization and Banking Crises: A Cross-Country Analysis," *International Review of Finance*, 10 (2), pp. 263-292.

Barth, J.R., G. Caprio, and R. Levine, 2001. "The Regulation and Supervision of Banks Around the World: A New Database," in: Litan, R.E., and R. Herring (Eds.), *Integrating Emerging Market Countries into the Global Financial System*. Brookings-Wharton Pap. Finan. Services. Brookings Institution Press, pp. 183-240.

Bernanke, B., 2005. "The Global saving glut and the U.S. Current Account Deficit," Speech delivered at the Sandridge Lecture, Virginia Association of Economics, Richmond, Virginia.

Bernanke, B., 2020. "The New Tools of Monetary Policy," American Economic Association Presidential Address.

Chauffour, J. P. and M. A. Gobezie, 2019. "Exiting Financial Repression: The Case of Ethiopia," World Bank Policy Research Working Paper No. 9082. Washington, D.C.: World Bank Group.

Dasgupta, K. and B. J. Mason, 2019. "The Effect of Interest Rate Caps on Bankruptcy: Synthetic Control Evidence from Recent Payday Lending Bans," Working Papers 2019-04, Auckland University of Technology, Department of Economics.

Del Negro, M., D. Giannone, M. P. Giannoni, and A. Tambalotti, 2019. "Global Trends in Interest Rates," *Journal of International Economics*, 118(C): pp 248-262.

Demirguc-Kunt, A. and E. Detragiache, 1998. "Cross-Country Empirical Studies of Systemic Bank Distress: A Survey," World Bank Working Paper No. 3719.

Federico, P., C. A. Vegh and G. Vuletin, 2014. "Reserve Requirement Policy over the Business Cycle," NBER Working Paper No 20612.

Ferrari, A., O. Masetti, and J. Ren, 2018. "Interest Rate Caps : The Theory and the Practice," World Bank Policy Research Working Paper No. 8398. Washington, D.C.: World Bank Group.

Feyzioğlu, T., N. Porter, and E. Takáts, 2009, "Interest Rate Liberalization in China," IMF Working Papers, WP/09/171.

Fry, M. J., 1978. "Money and Capital or Financial Deepening in Economic Development?", Journal of Money, Credit, and Banking, 10(4).

Fry, M. J., 1997. "In Favor of Interest Rate Liberalization," The Economic Journal, 107: pp. 754 -770.

Hanson, J. A, 2001. "Indonesia and India: Contrasting Approaches to Repression and Liberalization," in Financial Liberalization, ed. by Caprio, Honohan, and Stiglitz (Cambridge: Cambridge University Press).

Helms, B. and X. Reille, 2004. "Interest Rate Ceilings and Microfinance: The Story So Far," CGAP Occasional paper No. 9. Washington, DC: World Bank.

Heng, D., 2015. "Impact of the New Financial Services Law in Bolivia on Financial Stability and Inclusion," IMF Working Papers, WP/15/267.

International Monetary Fund, 2012. "The Liberalization and Management of Capital Flows - An Institutional View," IMF Policy Papers.

Ito, H., 2008. "Financial Repression," in: Reinert K. A. and R. Ramkishen (eds), The Princeton Encyclopedia of the World Economy. Princeton University Press, Princeton.

Jafarov, E., R. Maino, and M. Pani, 2019. "Financial Repression is Knocking at the Door, Again. Should We Be Concerned?", IMF Working Papers, WP/19/211.

Kaminsky, G. L. and C. Reinhart, 1999. "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems," American Economic Review 89. 473-500.

Kaminsky, G. L. and S. Schmukler, 2008. "Short-Run Pain, Long-Run Gain: Financial Liberalization and Stock Market Cycles," Review of Finance 12(2): pp. 253–292.

Loayza, N. V. and R. Rancière, 2006. "Financial Development, Financial Fragility, and Growth," Journal of Money, Credit and Banking 38(4): pp. 1051-1076.

Madeira, C., 2019. "The Impact of Interest Rate Ceilings on Households' Credit Access: Evidence from A 2013 Chilean Legislation," Working Papers Central Bank of Chile 840, Central Bank of Chile.

Maimbo, S. M. and C. A. Henriquez Gallegos, 2014. "Interest Rate Caps Around The World: Still Popular, But A Blunt Instrument," Policy Research Working Paper; no. WPS 7070. Washington, DC: World Bank Group.

Mckinnon, R., 1974. "Money and Capital in Economic Development." Washington D.C.: The Brookings Institution.

Mehran, H., M. Quintyn, and B. Laurens, 1996. "Interest Rate Liberalization and Money Market Development," International Monetary Fund: Washington, D.C.

Miller H., 2013. "Interest Rate Caps and their Impact on Financial Inclusion," Economic and Private Sector, Professional Evidence and Applied Knowledge Services.

Noy, I., 2004. "Financial Liberalization, Prudential Supervision, and the Onset of Banking Crises," *Emerging Markets Review*, Elsevier, vol. 5(3), pages 341-359, September.

Pereira Leite, S. and V. Sundararajan, 1990. "Issues in Interest Rate Management and Liberalization," *IMF Staff Papers*, 37, issue 4, p. 735-752.

Ranciere, R., A. Tornell and F. Westermann, 2006. "Decomposing the Effects of Financial Liberalization: Crises vs. Growth," *Journal of Banking & Finance* 30(12): pp. 3331-3348.

Reifner, U., S. Clerc-Renaud and M. Knobloch, 2010. "Study on Interest Rate Restrictions in the EU," Final Report for the EU" iff/ZEW, Commission DG Internal Market and Services, Project No. ETD/2009/IM/H3/87, Brussels/Hamburg/Mannheim.

Reinhart, C. and M. B. Sbrancia, 2015. "The Liquidation of Government Debt," *Economic Policy*, CEPR;CES;MSH, vol. 30(82), pp 291-333.

Roubini, N. and X. Sala-i-Martin, 1992. "Financial Repression and Economic Growth," *Journal of Development Economics*, 39, issue 1, pp. 5-30.

Safavian, M. and B. Zia, 2018. "The Impact of Interest Rate Caps on the Financial Sector: Evidence from Commercial Banks in Kenya," Policy Research Working Paper; No. 8393. World Bank, Washington, DC.

Schmelzing, P., 2020. "Eight Centuries of Global Real Interest Rates, R-G, and the 'Suprasecular' Decline, 1311–2018," Bank of England Working Paper No. 845, January 2020.

Schmukler, S., J. Tessada, C. Vasquez, and M. Vera, 2018. "Winners and Losers from Interest Rate Ceilings: Quasi-experimental Evidence from Chile," mimeo.

Shaw, E., 1973. "Financial Deepening in Economic Development." New York: Oxford University Press.

Stiglitz, J. and A. Weiss, 1981. "Credit Rationing in Markets With Imperfect Information," *American Economic Review*. 71. 393-410.

Summers, L. H., 2015. "Demand Side Secular Stagnation," *American Economic Review*, 105 (5): pp 60-65.

World Bank, 2017. "Global Financial Inclusion and Consumer Protection Survey".

Anginer, D., A. Bertay Can; R. J. Cull, A. Demirguc-Kunt, and D. S. Mare, 2019. "Bank Regulation and Supervision Ten Years after the Global Financial Crisis," World Bank Policy Research Working Paper No. 9044.

Zahid, S., 1995. "Financial Sector Development in Asia." Oxford University, New York.

Annexes

Annex 1. List of Surveyed Countries

	EAST ASIA & PA-CIFIC	EUROPE & CENTRAL ASIA	MIDDLE EAST & N. AFRICA	NORTH & SOUTH AMERICA	SOUTH ASIA	SUB-SAHARAN AFRICA
Countries with IRCs (2019)	Australia Korea Malaysia Marshall Islands Thailand Vietnam	Armenia Belgium Bulgaria Croatia Finland France Georgia Germany Guernsey Italy Kyrgyz Rep. Latvia Lithuania Netherlands N. Macedonia Portugal Russia San Marino Spain Sweden United Kingdom Uzbekistan	Israel Morocco	Anguilla Antigua & Barbuda Argentina Bolivia Brazil Chile Colombia Dominica Ecuador El Salvador Grenada Jamaica Montserrat Paraguay St. Kitts & Nevis St. Lucia St. Vincent & the Grenadines United States Uruguay	India Pakistan Sri Lanka	Benin Burkina Faso Côte d'Ivoire Ethiopia Guinea-Bissau Mali Mauritania Niger Senegal South Africa Togo
Countries without IRCs (2019)	China Hong Kong SAR Indonesia Japan Macao SAR New Zealand Philippines	Albania Azerbaijan Bosnia & Herzegovina Cyprus Czech Republic Estonia Greece Iceland Jersey Kosovo Liechtenstein Moldova Norway Romania Serbia Ukraine	Algeria Iraq Jordan Lebanon Malta Qatar	Bermuda Canada Costa Rica Dominican Rep. Guatemala Guyana Nicaragua Panama Peru	Bangladesh	Ghana Kenya Mauritius Seychelles Sudan Zambia

Annex 2. IRCs Around the World

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Anguilla	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	* Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
Antigua and Barbuda	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	* Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
Argentina	Lending rate cap	Commercial banks Cooperative banks Savings banks Financing companies Microfinance institutions	Retail: credit card loans	Absolute	All	Primary legislation	* Credit Cards Law N° 25.065	No	Administrative sanctions
Armenia	Lending rate cap	Commercial banks Microfinance institutions	All business loans All retail loans	Relative: central bank rate	All	Primary legislation	* Civil Code of the Republic of Armenia	No	Administrative sanctions
Australia	Lending rate cap	Financing companies Microfinance institutions	Retail: consumer loans Retail: credit card loans Retail: microcredit	Absolute	All	Primary legislation	* National Consumer Credit Protection Act, 2009	Yes	Voidance/ invalidity of contracts Administrative sanctions Criminal sanctions Automatic substitution of contractual provisions
Belgium	Lending rate cap Deposit rate cap Deposit rate floor	Commercial banks Cooperative banks	All business loans Retail: consumer loans Retail: resid. real estate Savings accounts	Absolute Relative: central bank rate	All	Primary legislation	*Mortgage law of 1992 *Royal Decree on saving deposits AR/ CIR92 *Royal Decree relating to the costs, rates, duration and repayment terms of credit contracts subject to the application of Book VII of the Code of Economic Law.	Yes	Administrative sanctions
Benin	Lending rate cap Deposit rate floor	Commercial banks Microfinance institutions	All business loans All retail loans All deposits	Absolute	Local	Regulation	*Central Bank Regulation WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.	No	Administrative sanctions

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Bolivia	Lending rate cap	Commercial banks	Business: working cap loans	Absolute	Local	Primary legislation	President's Supreme Decrees	No	Administrative sanctions
		Cooperative banks	Business: term loans				*Nº 1842		Automatic substitution of contractual provisions
		Microfinance institutions	Business: agricultural loans				*Nº 2055		
		Financing companies	Retail: resid. real estate						
			Retail: small business loans						
			Retail: microcredit						
Brazil	Lending rate cap	Commercial banks	Business: agricultural loans	Absolute	Local	Primary legislation	Special Laws	Yes	Voidance/ invalidity of contracts
		Cooperative banks	Retail: resid. real estate				*Nº 4.380; August 21, 1964		Administrative sanctions
		Savings banks	Retail: microcredit				*Nº 8.177; March 1, 2991		Criminal sanctions
		Microfinance institutions					*Nº 10.406; January 10, 2002		
	Deposit rate cap	Commercial banks	Savings accounts				Central Bank Resolutions		
	Deposit rate floor	Savings banks	Deposit: other accounts				*Nº 3109		
		Cooperative banks					*Nº 4676		
Bulgaria	Lending rate cap	Commercial banks	All retail loans	Relative: adminis- trative rate	All	Primary legislation	*Law on Consumer Credit	Yes	Voidance/ invalidity of contracts
			Financing companies				*Law on Obligations and Contracts		Administrative sanctions
									Automatic substitution of contractual provisions
Burkina Faso	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation	No	Administrative sanctions
		Microfinance institutions	All retail loans				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
	Deposit rate floor		All deposits						
Chile	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	Special Laws	Yes	Administrative sanctions

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
		Cooperative banks	All retail loans				*N° 18010, Establece normas para las operaciones de crédito y otras obligaciones de dinero *N° 20715, Sobre protección a deudores de créditos en dinero		
Colombia	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*Decree 1400, Código de Procedimiento Civil	No	Voidance/ invalidity of contracts
		Financing companies	All retail loans						Administrative sanctions
		Microfinance institutions							Criminal sanctions
		Cooperative banks							Automatic substitution of contractual provisions
Côte D'Ivoire	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation	No	Administrative sanctions
		Microfinance institutions	All retail loans				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
	Deposit rate floor		All deposits						
Croatia	Lending rate cap	Commercial banks	All retail loans	Relative: market rate	Local	Primary legislation	*Civil Code, NN 53/1991 (8.10.1991.). <i>Zakon o preuzimanju Zakona o obveznim odnosima</i>	Yes	Administrative sanctions
		Cooperative banks							
		Financing companies							
		Savings banks					*Consumer Credit Act NN 75/2009 (30.6.2009.). <i>Zakon o potrošačkom kreditiranju</i>		
Dominica	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
Ecuador	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Monetary and Financial Code	Yes	Voidance/ invalidity of contracts
		Cooperative banks	All retail loans						Administrative sanctions
		Financing companies							Criminal sanctions
	Deposit rate cap	Commercial banks	All deposits						Automatic substitution of contractual provisions
		Cooperative banks							
		Financing companies							

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement				
						Type	Reference						
El Salvador	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Primary legislation	*Usury Law N° 221	No	Administrative sanctions				
		Cooperative banks	All retail loans						Automatic substitution of contractual provisions				
		Savings banks											
		Financing companies											
		Microfinance institutions											
Ethiopia	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Regulation	*Interest Rate Directives N° NBE/INT/12/2017	No	Administrative sanctions				
		Savings banks	Certificates of deposits										
		Microfinance institutions											
Finland	Lending rate cap	Commercial banks	Retail: consumer loans	Absolute	All	Primary legislation	*Consumer Protection Act	Yes	Automatic substitution of contractual provisions				
			Retail: credit card loans										
France	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*Usury Law 66-101, December 28, 1966.	Yes	Administrative sanctions				
		Cooperative banks	All retail loans						Criminal sanctions				
		Savings banks							Automatic substitution of contractual provisions				
		Financing companies											
		Microfinance institutions											
	Deposit rate cap	Commercial banks	All deposits	Absolute									
		Cooperative banks											
	Deposit rate floor	Savings banks											
Georgia	Lending rate cap	Commercial banks	All business loans	Absolute	All	Primary legislation	*Civil Code of Georgia	Yes					
		Cooperative banks	All retail loans										
		Savings banks											
		Financing companies											
		Microfinance institutions											

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement	
						Type	Reference			
Germany	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*German Civil Code	Yes	Voidance/ invalidity of contracts	
		Cooperative banks	All retail loans						Administrative sanctions	
		Savings banks							Criminal sanctions	
		Microfinance institutions								
		Financing companies								
Grenada	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions	
Guernsey	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Court decision	*Court decision	No	Automatic substitution of contractual provisions	
		Cooperative banks	All retail loans							
		Savings banks								
		Financing companies								
		Microfinance institutions								
Guinea-Bissau	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.	No	Administrative sanctions	
		Microfinance institutions	All retail loans							
	Deposit rate floor		All deposits							
India	Lending rate cap	Microfinance institutions	Retail: consumer loans	Relative: market rate	Local	Regulation	Master Directions of the Central Bank of India	Yes	Administrative sanctions	
			Retail: microcredit				* Interest Rate on Advances, 2016		Automatic substitution of contractual provisions	
	Deposit rate cap	Cooperative banks	Certificates of deposits	Absolute	All		* Interest Rate on Deposits, 2016			
		Financing companies	Other accounts							
Israel	Lending rate cap	Commercial banks	All business loans	Relative: central bank rate	Local	Primary legislation	* Laws of the State of Israel	No	Voidance/ invalidity of contracts	
			All retail loans						Administrative sanctions	
										Criminal sanctions
										Automatic substitution of contractual provisions

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Italy	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*Italian Usury Law N° 108/96	Yes	Voidance/ invalidity of contracts
		Cooperative banks	All retail loans				*Decree of Minister of Economy and Finance; October 17, 2014. N°. 176		Administrative sanctions
		Savings banks							Automatic substitution of contractual provisions
		Financing companies							
		Microfinance institutions							
Jamaica	Lending rate cap	Microfinance institutions	Retail: microcredit	Absolute	All	Primary legislation	*The Money Lending Act; January 27, 1938	Yes	Automatic substitution of contractual provisions
Korea	Lending rate cap	Commercial banks	All business loans	Absolute	All	Primary legislation	*Act on Registration of Credit Business, etc. and Protection of Finance Users	Yes	Administrative sanctions
		Cooperative banks	All retail loans						Criminal sanctions
		Savings banks					*Enforcement Decree of the Act on Registration of Credit Business, etc. and Protection of Finance users		Automatic substitution of contractual provisions
		Microfinance institutions							
Kyrgyz Republic	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*Usury Law N° 163; July 24, 2013	Yes	Voidance/ invalidity of contracts
			Microfinance institutions	All retail loans					
Latvia	Lending rate cap	Commercial banks	All retail loans	Absolute	Local	Primary legislation	*Consumer Rights Protection Law	No	Administrative sanctions
		Cooperative banks							
		Savings banks							
		Financing companies							
		Microfinance institutions							
Lithuania	Lending rate cap	Commercial banks	Retail: consumer loans	Absolute	All	Primary legislation	*Law on Consumer Credit (Vartojimo Kredito Istatymas)	Yes	Administrative sanctions
		Cooperative banks	Retail: credit card loans						
		Financing companies	Retail: resid. real estate						

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Marshall Islands	Lending rate cap	Commercial banks	Retail: consumer loans	Absolute	Local	Primary legislation	*Primary legislation	No	Administrative sanctions
Malaysia	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Regulation	*Development Financial Institutions Act 2002	No	Automatic substitution of contractual provisions
Mali	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Resolutions	No	Administrative sanctions
	Deposit rate floor	Microfinance institutions	All retail loans All deposits				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
Mauritania	Lending rate cap	Cooperative banks	All business loans	Relative: administrative rate	Local	Regulation	*Instructions of Bank Debt Conditions N° 01/GR/2008	Yes	Voidance/ invalidity of contracts
		Commercial banks	All retail loans						
		Microfinance institutions							
	Lending rate floor	Commercial banks							
		Microfinance institutions							
	Deposit rate cap		All deposits						
Montserrat	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
Morocco	Lending rate cap	Commercial banks	All business loans	Relative: market rate	Local	Primary legislation	*Credit Institutions Law, N° 103-12 (<i>relative aux établissements de crédit et organismes assimilés</i>)	Yes	Administrative sanctions
	Deposit rate cap	Commercial banks	All deposits						
Netherlands	Lending rate cap	Commercial banks	All business loans	Relative: administrative rate	Local	Primary legislation	*Consumer Credit Law (<i>Besluit kredietvergoeding</i>)	No	Administrative sanctions
		Cooperative banks	All retail loans						
		Savings banks							
		Financing companies							
		Microfinance institutions							

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Niger	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation	No	Administrative sanctions
		Microfinance institutions	All retail loans				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
	Deposit rate floor		All deposits						
North Macedonia	Lending rate cap	Commercial banks	All business loans	Relative: administrative rate	All	Primary legislation	Law on Obligations	No	Voidance/ invalidity of contracts
		Savings banks	All retail loans						
		Financing companies							
	Deposit rate cap		All deposits						
Pakistan	Deposit rate floor	Commercial banks	Checking accounts	Relative: central bank rate	Local	Regulation	Circulars of the Central Bank of Pakistan:	Yes	Administrative sanctions
			Savings accounts				*N° 07 of 2008		
							*N° 07 of 2013		
							*N° 05 of 2014		
Paraguay	Lending rate cap	Commercial banks	All business loans	Relative: market rate	All	Primary legislation	*Usury Law N° 2.339/2003	No	Voidance/ invalidity of contracts
		Cooperative banks	All retail loans						
		Savings banks							
		Financing companies							
		Microfinance institutions							
Portugal	Lending rate cap	Commercial banks	All business loans	Relative: administrative rate	Local	Primary legislation	*Decree-Law N° 133/2009	Yes	Administrative sanctions
		Cooperative banks	All retail loans				*Central Bank Regulation		
	Deposit rate floor		All deposits	Absolute		Regulation			
Russia	Lending rate cap	Commercial banks	Retail: consumer loans	Relative: market rate	Local	Primary legislation	*Consumer Credit Law N° 353 (Федеральный закон "О потребительском кредите (займе)")	Yes	Voidance/ invalidity of contracts
		Cooperative banks	Retail: credit card loans						
		Financing companies	Retail: microcredit						
		Microfinance institutions							

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
San Marino	Lending rate cap	Commercial banks	All business loans	Absolute	All	Primary legislation	*Criminal Code, article 207	Yes	Administrative sanctions
		Financing companies	All retail loans				*Measurement of anti-usury threshold rate, Banca Centrale della Repubblica di San Marino		
Spain	Lending rate cap	Commercial banks	Retail: consumer loans	Relative: administrative rate	All	Primary legislation	Special Laws	Yes	Voidance/ invalidity of contracts
		Cooperative banks	Retail: resid. real estate				*N° 206; July 24, 1908		
		Savings banks					*N° 80; April 4, 1994		
		Financing companies					*N° 271; November 12, 2003		
		Microfinance institutions					*N° 294; December 8, 2007		
							*N° 151; June 25, 2011		
St. Kitts And Nevis	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
St. Lucia	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
St. Vincent And The Grenadines	Deposit rate floor	Commercial banks	Savings accounts	Absolute	Local	Primary legislation	*Eastern Caribbean Central Bank Agreement Act, 1983	No	Criminal sanctions
Senegal	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation	No	Administrative sanctions
	Deposit rate floor	Microfinance institutions	All retail loans All deposits				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
South Africa	Lending rate cap	Commercial banks	All retail loans	Relative: market rate	Local	Primary legislation	*National Credit Act, 2005	Yes	Voidance/ invalidity of contracts
		Cooperative banks							Criminal sanctions
		Financing companies							
		Microfinance institutions							
Sri Lanka	Deposit rate cap	Financing companies	All deposits	Relative: market rate	Local	Regulation	*Finance Business Act Directions, N° 2 of 2016, Central Bank of Sri Lanka	Yes	Administrative sanctions

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Sweden	Lending rate cap	Commercial banks	Retail: consumer loans	Relative: central bank rate	Local	Primary legislation	*Consumer Credit Act, 2010:1846 (Konsumentkreditlag)	Yes	Administrative sanctions
		Cooperative banks	Retail: microcredit						
		Savings banks							
		Financing companies							
		Microfinance institutions							
Thailand	Lending rate cap	Commercial banks	Retail: consumer loans	Absolute	Local	Regulation	Notifications of the Bank of Thailand:	Yes	Criminal sanctions
			Retail: credit card loans				*N° FPG. 12/2560		
		Financing companies	Retail: microcredit				*N° FPG. 13/2560		
							*N° FPG. (01) C. 5/2558		
							*N° FPG. 2/2558		
Togo	Lending rate cap	Commercial banks	All business loans	Absolute	Local	Regulation	*Central Bank Regulation	No	Administrative sanctions
		Microfinance institutions	All retail loans				WAEMU's Council of Ministers and the Board of the BCEAO, December 15 & 16, 1992.		
	Deposit rate floor		All deposits						
United Kingdom	Lending rate cap	Cooperative banks	All retail loans	Absolute	All	Primary legislation	*Consumer Credit Act 1974	Yes	Voidance/invalidity of contracts
		Financing companies					*PS14/16: Detailed rules for the price cap on high-cost short-term credit		Administrative sanctions
							*The Credit Unions (Northern Ireland) Order 1985		Criminal sanctions
United States	Lending rate cap	Commercial banks	Retail: consumer loans	Absolute	Local	Primary legislation	*Usury laws at the state level	Yes	Voidance/invalidity of contracts
		Cooperative banks	Retail: small business loans				*Federal Deposit Insurance Act		Administrative sanctions
		Savings banks	Retail: micro-credit						Criminal sanctions
		Financing companies							
		Microfinance institutions							
	Deposit rate cap		All deposits	Relative: market rate		Regulation			

Country	Type of IRC	Financial Institutions	Financial products	Method	Currency	Basis of regulation		Limits on fees	Enforcement
						Type	Reference		
Uruguay	Lending rate cap	Commercial banks	All business loans	Relative: market rate	All	Primary legislation	*Usury Law N° 18212	Yes	Administrative sanctions
		Cooperative banks	All retail loans						Criminal sanctions
		Financing companies							
		Microfinance institutions							
Uzbekistan	Lending rate cap	Commercial banks	Retail: small business loans	Absolute	All	Primary legislation	*Resolution of the President of the Republic of Pakistan of March 23, 2018 N° pp-3620, About additional measures for increase in availability of banking services	Yes	Voidance/ invalidity of contracts
		Microfinance institutions	Retail: microcredit						
Vietnam	Lending rate cap	Commercial banks	Business: com. real estate	Absolute	Local	Primary legislation	*Law on Credit Institutions	No	Administrative sanctions
		Cooperative banks	Business: agricultural loans						
		Savings banks Financing companies Microfinance institutions							
	Deposit rate cap		Certificates of deposits						