International ECONOMY
Increase of uncertainty in world trade

US – China dispute

Some of the key dates in the US – China trade negotiations

- The US and China agree to resume trade talks
- Uncertainty related to US-China trade tensions
- Tariff increase on US$200 billion of imports from China is scheduled to go into effect on March 1. But a delay is announced on February 24
- A series of tariffs by the US and China
- Uncertainty related to US-China trade tensions
- A tariff truce between the US and China is announced
- The US imposes Safeguard Tariffs as well as steel and aluminum tariffs
- A series of tariffs by the US and China goes into effect. The US also ends tariff exemptions for EU, Mexico and Canada. EU and Canada impose tariffs on the US

Trade tensions polarize voters

Trade uncertainty effect on global activity

- 0.8 p.p. on global activity in 2019.


US Economy

Probability of recession - US

Government popularity follows the economic activity

Source: NY Fed

Source: Refinitiv / Datastream
Industrial Production: fall among commercial partners

Industrial production (YoY - three months average)

- Commercial partners' industrial production (average weighted by exports of manufacture)

Source: Bloomberg, BCB computation
Global slowdown

Expected slowdown of the global economy

Global Growth

- Mar/18: 3.7%
- Sep/19: 3.2%

Source: Bloomberg
High monetary stimulus in advanced economies

27% of world bond market has negative return

Bonds with negative returns in the world: US$ 15 trillions

Holders of negative return assets (%)

Source: DB Global research, Bloomberg
Outflows from emerging economies – August/19

Emerging currency index – MSCI
(% change in August)

Source: Bloomberg
Outflows from emerging economies

Accumulated in 12 months – US$ billion

Stocks

Debt

Source: IIF
Brazilian Net FX Position

[Diagram showing the net foreign exchange position from 2008 to 2019, with a significant increase in 2019 to US$ 330 billion as of October 4th, 2019.]

Source: BCB.
Credibility increase of the Brazilian economy

Reduction of perceived excess risk*

5 year CDS (bps) versus credit rating**

1 year ex-ante real rates, 1 year Brazilian securities CDS. ** Standard & Poor’s (S&P) rating for long terms sovereign debt in foreign currency.
Domestic ECONOMY
Inflation Control and expectation anchorage

Source: BCB / IBGE

Breakeven inflation at NTN-B
Breakeven inflation at CPI derivatives (DAP)

Source: BCB / IBGE
Yield curve – DI future
2016 Reduction of inflation and of long term interests

IPCA 2015 10.67%

Source: Bloomberg
Yield curve – DI future

2016 Reduction of inflation and of long term interests

SELIC 2016 13.75%
IPCA 2015 10.67%
IPCA 2016 6.29%

Source: Bloomberg
2019 Agenda of reforms supports reduction of risk premia

SELIC rate 5.50%

Reform agenda contributes to lower long-term interest rates

IPCA 2016 6.29%
2017 2.95%
2018 3.75%

Source: Bloomberg
Credibility on long term targets

Fast convergence of expectations after definition of new targets

2021 Inflation Target

2022 Inflation Target

Source: BCB.
Monetary Policy

• In its last meeting, Copom unanimously decided to lower the Selic rate to 5.5% p.y.

• The economic conditions prescribe stimulative monetary policy, i.e., interest rates below the structural level.
Monetary Policy – Risks to the baseline inflation scenario

• Risk of inflation reduction:
  i. The high level of economic slack may continue to produce lower-than-expected prospective inflation trajectory.

• Risks of inflation increase:
  ii. A possible frustration of expectations regarding the continuation of reforms and the perseverance in the necessary adjustments in the Brazilian economy may affect risk premia and increase the path for inflation over the relevant horizon for the conduct of monetary policy.

• Risk (ii) intensifies in case of:
  iii. The outlook for emerging economies deteriorates.
Monetary Policy – Next steps

• The consolidation of the benign scenario for prospective inflation should permit additional adjustment of the degree of stimulus.

• The next steps in the conduct of monetary policy will continue to depend on the evolution of economic activity, on the balance of risks, and on inflation projections and expectations.
Macro Stability: different policies, different instruments

Macroeconomic Stability

- Monetary Policy
  - Interest Rate
- Financial Stability Policy
  - Macroprudential Measures
- FX Policy
  - FX Interventions
GDP growth: Brazil and abroad

- **GDP growth (%)(average)**
  - 1995-1998
  - 1999-2002
  - 2003-2006
  - 2007-2010
  - 2011-2014
  - 2015-2016
  - 2017-2018
  - 2019-2020

- **Public sector capital formation (excluded subnational government corporations)**

- **Investment (% of GDP)(average)**
  - FHC II (1999-2002)
  - Lula I (2003-2006)
  - Lula II (2007-2010)
  - Dilma I (2011-2014)
  - Dilma II (2015-2016)
  - Temer (2017-2018)
  - Bolsonaro (2019-2020)

- **Forecast**

- **Brazil**
- **EME**
- **World**

**Fonte:** FMI – World Outlook, FGV
Expectation on economic recovery

IBC-Br shows recent improvement

IBC-Br* (seasonally adjusted, 2014 = 100)

1.6 % of GDP Growth in the second quarter

GDP and demand side components
(seasonally adjusted, 2014 = 100)

IBC-Br is an indicator calculated by BCB which takes into account PIM, PMC, PMS, LSPA, PNAD-C and other short-term activity information.

** Actual (continuous line) and market expectation - median Focus 10/11/2019 (dashed line)
Available labor income

Seasonally adjusted Index (Aug/19 = 100)

Source: IBGE, BCB
Brazilian growth affected by important shocks in 2019

Projection 2019 (Focus Oct/19): 0.87
Argentina: 0.18
Global deceleration: 0.29
Brumadinho: 0.20
Forecast 2019 (no shocks): 1.54

Source: BCB
Capital and credit market expansion

Credit growth remains robust

The following chart illustrates the growth of outstanding credit over 12 months for total credit and non-earmarked credit from 2016 to 2020. The chart shows the percentage growth rates for each period:

- **2016**: Non earmarked credit - 5.1%
- **2017**: Non earmarked credit - 5.7%
- **2018**: Non earmarked credit - 12.0%
- **2019**: Non earmarked credit - 12.0%
- **2020**: Non earmarked credit - 11.4%

The data is sourced from BCB / IBGE / FGV.
Credit/GDP gap – there is room to keep growing

### Credit/GDP gap, disregarding FX effects

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>15.0</td>
<td>10.0</td>
<td>5.0</td>
<td>0.0</td>
<td>-5.0</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2001</td>
<td>10.0</td>
<td>5.0</td>
<td>0.0</td>
<td>-5.0</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
</tr>
<tr>
<td>2004</td>
<td>5.0</td>
<td>0.0</td>
<td>-5.0</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>2007</td>
<td>0.0</td>
<td>-5.0</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
<td>-3.6</td>
</tr>
<tr>
<td>2010</td>
<td>-5.0</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
<td>-3.6</td>
<td>-2.4</td>
</tr>
<tr>
<td>2013</td>
<td>-10.0</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
<td>-3.6</td>
<td>-2.4</td>
<td>-1.2</td>
</tr>
<tr>
<td>2016</td>
<td>-5.0</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
<td>-3.6</td>
<td>-2.4</td>
<td>-1.2</td>
<td>0.0</td>
</tr>
<tr>
<td>2019</td>
<td>0.0</td>
<td>-1.2</td>
<td>-1.8</td>
<td>-3.6</td>
<td>-2.4</td>
<td>-1.2</td>
<td>0.0</td>
<td>1.2</td>
</tr>
</tbody>
</table>

**Legend:**
- Foreign market
- Corporate, earmarked
- Corporate, non-earmarked
- Households
- Total

### Annual growth and volume

**Jun/2019**

- **Growth in last 12 months (p.p. of GDP):** 1.2, 0.6, 0.0, -0.6, -1.2, -1.8

**Banking credit/GDP gap**

- Payroll-deducted personal loans
- Excluding payroll-deducted
- Rural, households
- Credit card
- Operations with receivables
- Real estate, Corp.
- Real estate, households
- Real estate
- Infrastructure
- Home equity
- Reverse mortgage
- Sanitation
- Legal environment and risk
- FX Hedge
-别的

**Source:** BCB, B3, CVM and IBGE.
Capital markets democratization

People trading in the stock market*

Debentures
Accumulated issuing in 12 months

* - in thousands

Source: B3 / BCB.

Fonte: BCB / IBGE / FGV.

Actual
Forecast

R$ billions
Changes already underway

Covered bonds* stock keeps growing:

- R$ 1 billion stock increase in Aug/2019
Fintech growth

• In 2018 the BCB regulated 2 kinds of credit fintechs:
  • Direct credit (SCD)
  • Peer-to-peer (SEP)

• The segment is blossoming:
  • 13 firms already in the market:
    • 9 SCDs
    • 4 SEPs
  • 20 waiting for the BCB authorization

• Outstanding credit is growing by 300% on a yearly basis.*

• The segment is already responsible for near US$ 250 millions in credit operations.

• A major aport in 2019 increased the capital of credit fintech by US$ 231 millions.

* - According to the Associação Brasileira de Crédito Digital (ABCD)
Changes already underway

- Investment funds have to redefine their business

<table>
<thead>
<tr>
<th>Initial investment (R$)</th>
<th>Administration fee (% p.y.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 1,000</td>
<td>2.3</td>
</tr>
<tr>
<td>from 1,000 to 25,000</td>
<td>1.0</td>
</tr>
<tr>
<td>from 25,000 to 100,000</td>
<td>0.9</td>
</tr>
<tr>
<td>more than 100,000</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>1.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income tax (%)</th>
<th>Breakeven Adm. Fee (% p.y.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.5</td>
<td>0.51</td>
</tr>
<tr>
<td>20.0</td>
<td>0.66</td>
</tr>
<tr>
<td>17.5</td>
<td>0.80</td>
</tr>
<tr>
<td>15.0</td>
<td>0.93</td>
</tr>
</tbody>
</table>

* Hypothesis:
1) Selic rate: 5.50% p.y. and
2) Returns of 100% of CDI

Source: BCB.
Fall of the banking credit cost

Source: BCB.

Selic

ICC - Nonearmarked Resources (right)

% p.a.


Source: BCB.
Spread decomposition

Emerging Countries * | Brazil
--- | ---
Funding cost ** | 4.0% | 6.5%
Inflation** | 3.1% | 3.7%
Default*** | 3.4% | 3.6%
Banking Spread ** | 3.8% | 18.4%
Loan Recovery** | 52.7% | 14.6%
Recovery Time** | 1.7 year | 4.0 years

*Average among Chile, China, Colombia, Indonesia, Mexico, Russia, South Africa and Thailand
**2018.
***2016.

Source: IFS/IMF, WEO/IMF, Doing Business/World Bank, GFDD/World Bank, BCB and IBGE.

---

Source: BCB/REB.
Emergency credit lines are regressive

Overdraft

User Profile

- 6 months or more per year (■ - all year)
  - 19.5%

- Overdraft is the biggest debt (■ - overdraft is the only debt)
  - 7%
  - 12%

- In default (■ - in the overdraft)
  - 8.8%
  - 16.8%

Age: from 34 to 54 years old
- 44%

Income: less than 2 minimum wages
- 44%

Education: high school or less
- 67%

The larger the borrower’s income, the less the compromised income

<table>
<thead>
<tr>
<th>Borrower’s income</th>
<th>Part of the income compromised with overdraft interests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median</strong></td>
<td><strong>Top 10% indebted</strong></td>
</tr>
<tr>
<td>Up to 2 m.w.*</td>
<td>2.75% 21.10%</td>
</tr>
<tr>
<td>From 2 to 5 m.w.*</td>
<td>1.62% 10.80%</td>
</tr>
<tr>
<td>From 5 to 10 m.w.*</td>
<td>1.21% 9.20%</td>
</tr>
<tr>
<td>Above 10 m.w.*</td>
<td>0.79% 7.50%</td>
</tr>
</tbody>
</table>

* m.w. - minimum wage

Source: BCB/REB

“Cheque Especial: Estatísticas adicionais sobre sua utilização”, BCB Special Studies nº 60/2019.
Overdraft, financial education is the answer

Room for improvement with users:

• Understanding how the instrument operates
• Developing skills to choose the more appropriate instrument to their needs

Dimension: Financial Education

Source: BCB/REB
Improvements in card market

Credit Card Machine Accrediter
Market share (2015)

- Two largest: 85.2%
- Others: 14.8%

Credit Card Machine Accrediter
Market share (2018)

- Two largest: 69.0%
- Others: 31.0%

Source: BCB.
Improvements in card market

Discount rate - Cards

Source: BCB.
REFORMS

Agenda BC #
Why a reform agenda?

Structural reforms: current situation*

Source: FMI – Brazil: boom, bust, and the road to recovery.

* - Standardized for 1 to be the maximum level
Why a reform agenda?

Low growth and halted productivity

Source: FMI – Brazil: boom, bust, and the road to recovery
Why the Agenda BC #?

Filling the gap: productivity impact

Source: FMI – Brazil: boom, bust, and the road to recovery
Why the Agenda BC 🗓️?

Financial sector reforms have popular support and high productivity impact

- Products market
- Legal system
- Trade openness
- Easier to legislate
- More difficult to legislate
- Banking sector
- Labor market

Population support to the reforms (%) vs. Impact on productivity (%)

Source: FMI – Brazil: boom, bust, and the road to recovery
Agenda BC – Recent actions

• Electronic Invoice Law

• Positive Credit Bureau Law
  o Both will improve competitiveness in the credit market and the banking spread.

• New funding instruments for Credit Unions

• Capital Markets Initiatives: actions to facilitate investor’s access and to promote competitiveness of fund offering.

• Use of CPI in real estate financing contracts
  o Flexibility in housing market, fostering its integration to the capital market, via securitization.
Investments – new properties

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>Metropolitan Region of São Paulo – RMSP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net sales</td>
<td>New properties offering</td>
</tr>
<tr>
<td>Accumulated in 2018</td>
<td>88,050</td>
<td>100,405</td>
</tr>
<tr>
<td>Accumulated in the last 12 months</td>
<td>93,245</td>
<td>103,678</td>
</tr>
<tr>
<td>Variation</td>
<td>6%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Fonte: Abrainc (Brazilian Association of Real Estate Developers) and Secovi/SP
In a conservative scenario, around R$ 500 billions can be injected in the credit market, almost the total current real estate credit stock.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Home Equity</th>
<th>CDC *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Value (R$)</td>
<td>R$300 thousands</td>
<td>R$50 thousands</td>
</tr>
<tr>
<td>Nº of instalments</td>
<td>120 months</td>
<td>Up to 48 months</td>
</tr>
<tr>
<td>Interest rate (% p.y.)</td>
<td>TR + 15%</td>
<td>153.63% p.y.</td>
</tr>
<tr>
<td>Actual Total Cost** (% p.y.)</td>
<td>TR + 18%</td>
<td>160% p.y.</td>
</tr>
<tr>
<td>1st payment</td>
<td>R$6,490.60 (with insurance)</td>
<td>R$4,123.49 (without insurance)</td>
</tr>
</tbody>
</table>

** - LTV of 60%

---

1 - IBGE (number of residences) and BCB (average value of residences)
2 - IBGE (residences with unsettled debt) and UN-Habitat (residences under irregular legal status)
3 - Assumption: Part of the total value of residences with unsettled debt or under irregular legal status that is not available for collateralization
Agenda BC# – FX Simplification

Main Goals

Modernization

Simplification

Legal Security

Alignment to international best practices

Single and embracing Law
- Consolidation and revocation (more than 40 instruments created after 1920)

Rationalized and principle oriented regulation
- End of antiquated requirements, searching for more efficiency

Flexibility to incorporate technological innovations
- Possibility of incorporating new business models and agents
Agenda BC – LFA

- ER
  - Diagnostic
  - Operational model proposals

- LFA
  - Policy proposals (assets and counterparty eligibility)
  - Risk and price methodologies

Liquidity Financial Assistance (LFA)

Ordinary Situations:
Legally and regulatory foreseen operations

Lending: Foreign currency
Lending supported by Law (Law 4,959/64 and 11,882/08)

Operation: Regular
- 15 working days
- 90 consecutive days

Modalities: repo, or rediscount

Operation: Special
- Up to 359 consecutive days

Modalities: repo

Extraordinary Situations
Specific Law required (LRF)

FGC Financial Assistance
FGC Resources Allocation Program
Agenda BC – LFA

- Compliance with FSAP recommendation (2012)
- Incentive to liquidity in markets
- Promotion of asset registering
- Facility to perform a classic central bank function
- Structural reduction compulsory deposits needs
* In October, 14th 2019
Agenda BC# – BCB Autonomy

- Countries with more autonomous CBs have lower inflation level and volatility

Conclusions

• Selic rate renewed its historical minimum at Copom last meeting.
  ▪ External outlook is still uncertain and risks of a deeper slowdown of the global economy remain.
  ▪ Reforms and adjustments of the Brazilian economy are progressing;
  ▪ The continuity of this process is essential for the structural interest rate reduction and the sustainable recovery of the economy.
  ▪ The next steps of the Monetary Policy will continue to depend on the evolution of economic activity, on the balance of risks, and on inflation projections and expectation, and the consolidation of the benign scenario for prospective inflation should permit additional adjustment of the degree of stimulus.
Conclusions

• Another important issue has been the BCB renewed credibility, built on a cautious conduct of the Monetary Policy.
  ▪ An additional step toward more credibility will come from the approval of BCB Autonomy Bill.

• Moreover, to contribute to productivity growth in our economy, the Agenda BC# acts to remove existing barriers that prevent the financial system to fulfill its role of promoting an efficient resource allocation among the economic activities.
THANK YOU

ROBERTO CAMPOS NETO
Governor of Central Bank of Brazil

October, 2019