HUNGARY’S RESPONSES TO THE GREAT FINANCIAL CRISIS
THE STARTING POSITION IN 2010 WAS EXTREMELY DIFFICULT

Global phenomena

- Decrease of global demand and trade
- Deleveraging
- Liquidity shortage
- Risk aversion
- Lack of confidence

Country-specific factors

- Hungary had practically no toxic assets like the US and EU banks had, but suffered from other serious economic weaknesses:
  - Extremely weak fiscal position
  - Vulnerable external position
  - High tax wedge
  - Low activity rate
  - High tax avoidance
  - FX mortgage loans
  - Low growth
BUDGET BALANCE AND GOVERNMENT DEBT IN HUNGARY AND GREECE, 2007-2008 (AS A PERCENTAGE OF GDP)

**Budget balance**

<table>
<thead>
<tr>
<th>Year</th>
<th>Hungary</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-5</td>
<td>-7</td>
</tr>
<tr>
<td>2008</td>
<td>-4</td>
<td>-10</td>
</tr>
</tbody>
</table>

**Government debt**

<table>
<thead>
<tr>
<th>Year</th>
<th>Hungary</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>65</td>
<td>103</td>
</tr>
<tr>
<td>2008</td>
<td>71</td>
<td>109</td>
</tr>
</tbody>
</table>

Source: AMECO

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• Hungary had the second largest fiscal deficit in the EU (behind Greece) before the Great Financial Crisis and the fifth highest public debt.

• Nevertheless, Hungary was the first to be attacked by the markets, not Greece, because the latter was thought to be protected by its membership in the eurozone.

• In November 2008, Hungary entered into 17-month stand-by arrangement with the IMF in the amount of SDR 10.5 billion (€12.5 billion), 1015% of quota. In addition, it received €6.5 billion from the EU and €1 billion from the World Bank, altogether a credit line of €20 billion.
**EXCHANGE RATE**

**HUF/EUR nominal exchange rate,**
January 2007 – June 2019 (1000 HUF/EUR)

**CPI based real effective exchange rate**,  
January 2007 – May 2019 (2005=100%)

*Note: Countries in the calculation, according to their weight, are the followings in descending order: Germany, China, France, Italy, Netherlands, Austria, Poland, Czech Republic, United Kingdom, Belgium, Japan, Slovakia, United States, Romania, Spain, South Korea, Turkey, Russian Federation, Hong Kong, Taiwan, Sweden*

Source: National Bank of Hungary
POLICY TURNOVERS

- Fiscal policy turnaround
- Monetary policy turnaround
- Vulnerability turnaround
- Regulatory turnaround
- Growth and employment turnaround
FISCAL POLICY TURNDOWN
BUDGET BALANCE IN EU MEMBER STATES (2007, 2010, 2018)

Source: AMECO

As a percentage of GDP

2007

2010

2018

in per cent of GDP
Since 2012 the primary budget balance has been positive.
• **Goal**: to shift the tax burden from labor and corporations to consumption.

• **PIT**: *until 2010* progressive tax ranging between 17% and 32%. *2011*: introduction of flat tax at 16%; *2016*: **flat tax** reduced to **15%**.

• **VAT**: 5%, 18%, **27%** (25%, until 2012). *Measures to reduce tax avoidance.*

• **CIT**: *2009*: 16% in general, 10% under 50 million HUF tax base. *2017*: uniform rate of **9%**.

• **Special sectoral taxes** on financial institutions and certain large profitmaking corporations (energy, distribution chains).

• **Employer’s social contribution tax**: progressive reduction from 27% in *2010* to 17,5% in *2019*. 
TAX SYSTEM TURNAROUND

The tax system shifted from taxes on labour to taxes on consumption

REFORM OF THE TAX SYSTEM

Aggregated effects of tax measures compared to 2009
FISCAL REVENUES FROM SPECIAL TAXES, 2010-2018 (IN PER CENT OF GDP)

As a percentage of GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>Accident tax</th>
<th>Insurance tax</th>
<th>Financial transaction tax</th>
<th>Telecommunications tax</th>
<th>Public utilities tax</th>
<th>Income tax of energy suppliers</th>
<th>Special tax on financial organizations</th>
<th>Special tax on certain sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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<td>2011</td>
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<td>2012</td>
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<tr>
<td>2013</td>
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<td>2014</td>
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<td>2015</td>
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<td>2016</td>
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<td>2017</td>
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<td>2018</td>
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</tbody>
</table>

Source: National Bank of Hungary
HUNGARIAN TAX WEDGE DECLINED BUT IS STILL HIGHER THAN EU AVERAGE

(at least without family tax allowance)

AVERAGE TAX WEDGE, SINGLE PERSON AT 100% OF AVERAGE WAGE IN 2017

Source | OECD
FISCAL EXPENDITURES (AS PERCENTAGE OF GDP)
2010-2018

Source: Eurostat
MONETARY POLICY TURNAROUND
THE PATH OF THE CENTRAL BANK BASE RATE, 2012-2018 (PER CENT)

Source: National Bank of Hungary
INFLATION TARGETING REGIME IN HUNGARY

Source | MNB

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Consumer price index

Year-end targets

Medium term inflation target

Tolerance band

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Source | MNB
Government’s interest rate expenditure, 2013-2017 (as a percent of GDP)

MNB launched a **Funding for Growth Scheme (FGS)** in June 2013. Under the FGS, the central bank provided Forint loans at a **0% interest rate** to credit institutions, which could lend on these loans to SMEs with an interest margin **capped at 2.5%**.

In its **first phase**, FGS was used to a large extent to **refinance** previously contracted more expensive old loans, which undeniably produced a more muted growth effect, but helped a large number of SMEs to either achieve more favorable and more predictable interest rate burdens, or get rid of their foreign currency loans and the exchange rate risk involved.

The **second phase** of FGS was launched in March 2015. **MNB assumed 50% of SMEs’ credit risk** to improve access to credit by firms that had previously been excluded from the FGS on the basis of risk considerations. Only once was the MNB asked to realize the assumed risk.
In early 2016, the Growth Supporting Program (GSP) was launched, as a third phase of the FGS. MNB funding was provided only for investment purposes, while SMEs with natural hedges gained access to foreign currency loans, which had not been available in the previous phases.

Another part of GSP was the Market-Based Lending Scheme (MLS). The MNB helped banks with the transition to market-based lending primarily through an instrument supporting risk management, and an instrument supporting liquidity management.
• To hedge their interest rate risk resulting from lending at fixed rates, banks were offered by the MNB a *lending interest rate swaps (LIRS)*, conditional on lending. The MNB pays interest at a variable rate in exchange for a fixed interest rate received. LIRS were auctioned off at a favorable price.

• Linked to LIRS, a *preferential deposit facility at the MNB*, on which the base rate was paid, was introduced to support banks with liquidity management. It was capped at 50% of each bank’s LIRS transaction.

• The tenders for LIRS were discontinued, but there is outstanding stock from previous contracts.

• Starting in January 2018, MNB introduced a *favorably priced monetary interest rate swap (MIRS)* to encourage financial institutions to lend long term at fixed interest rates.

• The MIRS is for 5 and 10 years, auctioned off weekly at fixed price and at a maximized limit.

• MNB also introduced in January 2018 a *mortgage paper purchasing program*, which helped reduce the mortgage interest rates.
A Self-Financing Program was launched by the MNB in April 2014. The goal was to squeeze out from the MNB the excess liquidity of banks in order to encourage banks to use their liquidity to lend to the economy or buy domestic securities in order to reduce the FX exposure and vulnerability of the country.

The traditional main policy instrument of the MNB had been the 2-week central bank bonds auctioned off weekly without a quantitative limit in order to absorb excess liquidity. These bonds could be used as collateral and could also be sold on the secondary market. Many non-residents purchased them.

In August 2014, the CB bonds were replaced by 2-week deposits at the MNB which were of course not marketable and could not be used as collateral. Hence, they were less attractive for banks to hold.
• In June 2015, the 2-week deposits were replaced by 3-month deposits and, in decreasing magnitudes, the quantity was limited. When the limit is exhausted, no more 3-month deposits are available for banks at the MNB.

• In December 2015, the reserve ratio requirement was reduced to uniform 2% from variable 2-5%. The base rate is paid on required reserves, but no interest is paid on excess reserves. With the decline in required reserves, banks were interested to withdraw additional deposits from MNB.
In the summer of 2014, an interest rate swap system (IRS) was introduced to encourage banks to buy long-term domestic securities. IRS was distributed in variable-price tenders.

- Difference with LIRS: IRS was for longer term.
- The tenders of IRS were discontinued, but there is outstanding stock from previous contracts.
- All the above measures to squeeze out the excess liquidly from the MNB increased the domestic currency share of the government debt and also led to a significant reduction in long term interest rates.
- Bond purchase for growth.
DUE TO THE FUNDING FOR GROWTH SCHEME HUNGARY WAS ABLE TO AVOID A CREDIT CRUNCH

GROWTH RATE OF LOANS OUTSANDING TO THE WHOLE CORPORATE AND SME SECTORS

**Introduction of FGS**

**Optimal range of growth rate**

Source | MNB
EXTERNAL VULNERABILITY TURNAROUND
After 2003, due to rising demand for credit and the unfavorable terms of Forint lending (high average market rate of 12-13 per cent), **households were driven towards foreign currency-based loans, which offered much more favorable interest rate terms.** The bulk of the FX loans were in Swiss Francs and the rest in Yen and Euro.

- Most households did not take into account the foreign exchange rate risk.
- Expectation of entry into the eurozone mitigated the fear of currency risk.
- The mortgage loan amount was expressed in HUF tied to the HUF/CHF exchange rate. As the HUF exchange rate depreciated against CHF, the outstanding loan amount and the associated monthly mortgage payments rose.
- Non-performing loans increased as the debt burden of borrowers rose.
- Simultaneously, household consumption and savings fell as households deleveraged.
Several attempts were made to reduce the burden of household borrowers in FX before a final solution was implemented in 2014, luckily just before the Swiss Franc was floated and started to appreciate.

The conversion was made at the HUF/CHF market rate and the MNB provided the FX or FX swaps for the banks to close their FX open positions as they de-linked the loans from the FX.

As a result of the conversion, the MNB’s international reserves fell, but from a high level.

Following the conversion, borrowers pay a HUF interest rate, which in the meanwhile was sharply reduced as a result of the MNB’s interest rate cutting cycle. The borrowers do not carry any exchange rate risk anymore.

As a result, NPLs were also reduced.

The elimination of the exchange rate risk made the mortgage payment more predictable, which has strengthened confidence and contributed to the increase in consumption.
Conversion of households’ foreign currency denominated loans eliminated the largest source of vulnerability.
THE RATIO OF NON-PERFORMING LOANS (NPL) WITHIN THE LOAN PORTFOLIO IN HUNGARY, 2000-2017 (IN PERCENT)

Source: World Bank
THE RESERVE ADEQUACY OF THE MNB REACHED THE LEVEL THAT ALLOWED FOR SAFE CONVERSION

THE MNB’S FOREIGN EXCHANGE RESERVES AND SHORT-TERM EXTERNAL DEBT
DEBT-TO-GDP RATIO DECREASES WITH FALLING SHARE OF FX DEBT

Gross public debt, 2000-2021* (in per cent of GDP)

Note: *2019-2021 forecasts of MNB are calculated with unchanged (end-of-2018) exchange rate.
Source: National Bank of Hungary, Government Debt Management Agency
GROSS EXTERNAL DEBT DECLINED TO A HISTORICAL LOW

GROSS EXTERNAL DEBT IN A SECTORAL BREAKDOWN
(AS A PERCENTAGE OF GDP, EXCLUDING INTERCOMPANY LOANS)

Source | MNB Report on balance of payments, April 2019
CURRENT ACCOUNT BALANCE IN EU MEMBER STATES (2007 AND 2018)

As a percentage of GDP

2007

2018

Source: AMECO
Note: *Data for Croatia originates from 2016.
5-YEAR CDS SPREADS, 2007-2019 (BASIS POINTS)

Source: Bloomberg, National Bank of Hungary

Note: Data of French government securities are missing for certain periods.
<table>
<thead>
<tr>
<th>Year</th>
<th>Moodies</th>
<th>S&amp;P</th>
<th>Fitch</th>
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<tbody>
<tr>
<td>2012</td>
<td>Ba1</td>
<td>BB</td>
<td>BB+</td>
</tr>
<tr>
<td>2013</td>
<td>Ba1</td>
<td>BB</td>
<td>BB+</td>
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<tr>
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<td>2018</td>
<td>Baa3</td>
<td>BBB-</td>
<td>BBB-</td>
</tr>
<tr>
<td>2019</td>
<td>Baa3</td>
<td>BBB</td>
<td>BBB</td>
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Source: National Bank of Hungary
REGULATORY TURNAROUND
### The summary of regulatory responses to the financial crisis at global and EU level applicable in Hungary

<table>
<thead>
<tr>
<th>Topic</th>
<th>Global</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of macroprudential supervisory framework</td>
<td>FSB, Basel Committee</td>
<td>ESRB, EBA Regulations, CRD</td>
</tr>
<tr>
<td>Strengthening capital requirements, leverage ratio</td>
<td>Basel III</td>
<td>CRD, CRR</td>
</tr>
<tr>
<td>G-SII and O-SII banks</td>
<td>FSB, Basel Committee</td>
<td>CRD, Banking Union</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Basel III</td>
<td>CRD, CRR</td>
</tr>
<tr>
<td>Resolution framework</td>
<td>FSB, Basel Committee</td>
<td>BRRD</td>
</tr>
<tr>
<td>Extension of disclosure requirements</td>
<td>Basel III</td>
<td>CRR</td>
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<td>Corporate Governance</td>
<td>FSB</td>
<td>CRD</td>
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<tr>
<td>Qualitative and quantitative developments in EU legislation</td>
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<td>CRD, CRR, Regulations</td>
</tr>
<tr>
<td>Strengthening the role of EBA</td>
<td></td>
<td>CRR, EBA Regulation</td>
</tr>
<tr>
<td>Single EU supervisor</td>
<td></td>
<td>Banking Union</td>
</tr>
</tbody>
</table>
ADDITIONAL REGULATORY RESPONSES AT HUNGARIAN LEVEL

- Transfer of FSA to the National Bank of Hungary.
- Prohibition of unilateral contract amendments disadvantageous to the banks’ customers.
- “Debt brake limits”: loan-to-income and loan-to-value limits.
- Tightening the conditions for retail foreign currency loans to prevent excessive risk build-ups: households can borrow in FX only if they have sufficient income in the FX currency in which they want to borrow.
- Rules with respect of non-performing loans: banks with NPL over 5% have to submit a plan detailing how they will reduce the amount of NPLs.
- Several measures to reduce the currency and maturity mismatches.
- Much stricter enforcement of regulations.
GROWTH TURNAROUND AND EMPLOMENT TURAROUND
GROWTH TURNDOWN

REAL GDP GROWTH
Between 2000 and 2020

Source | KSH, MNB forecast

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Hungarian economy grows faster than the EU average.

CONVERGENCE TURNAROUND

Hungarian economy grows faster than the EU average.

ANNUAL REAL GDP CHANGE (%)
For 2019 based on the winter 2019 interim forecast of the European Commission

Source | European Commission

Szapáry©2019
Hungarian unemployment rate is one of the lowest in the EU.
REAL EARNINGS INDEX, 2010-2018
(Per cent, 2010=100%)

Full-time employees in the national economy

Full-time employees in the manufacturing sector

Note: Data from 2013 without employees under the public works program.
Source: Hungarian Central Statistical Office
## The Economic Turnarounds realised in Hungary Enable a New Competitiveness Turnaround

<table>
<thead>
<tr>
<th>TURNAROUND</th>
<th>2010</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Labour market</td>
<td>Employment</td>
<td>3.7 m</td>
</tr>
<tr>
<td>2 Tax system</td>
<td>Shift from taxes on labour to taxes on consumption</td>
<td>❌</td>
</tr>
<tr>
<td>3 Motivational</td>
<td>Marginal tax wedge</td>
<td>64.1%</td>
</tr>
<tr>
<td>4 Public finance</td>
<td>Budget deficit</td>
<td>-4.5%</td>
</tr>
<tr>
<td>5 Public debt</td>
<td>Gross public debt</td>
<td>80.2%</td>
</tr>
<tr>
<td>6 EDP</td>
<td>End of EDP procedure</td>
<td>❌</td>
</tr>
<tr>
<td>7 Monetary policy</td>
<td>Base rate</td>
<td>6.0%</td>
</tr>
<tr>
<td>8 Lending</td>
<td>Annual change in lending to the enterprises</td>
<td>-2.5%</td>
</tr>
<tr>
<td>9 FX loans of households</td>
<td>Foreign currency denominated loans of the household sector as percent of GDP</td>
<td>65%</td>
</tr>
<tr>
<td>10 Balance sheet of the MNB</td>
<td>MNB balance sheet as percent of GDP</td>
<td>40.7%</td>
</tr>
<tr>
<td>11 Growth</td>
<td>Real GDP growth</td>
<td>0.7%</td>
</tr>
<tr>
<td>12 Convergence</td>
<td>Annual real GDP growth exceeding the EU average</td>
<td>❌</td>
</tr>
</tbody>
</table>
THANK YOU FOR YOUR ATTENTION!