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Initial Monetary Policy Response to the COVID-19 Pandemic in Inflation Targeting Economies

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This presentation represents the opinions of the author.
It is not meant to represent the position of the NBP.

Monetary policy response to COVID-19 was exceptional in many respects

- The paper investigates several aspects of this exceptionality among inflation targeters, by looking at:
 - the scope of the adopted measures
 - the sequence of the adopted measures
 - the timing of announcing the policy response
 - factors influencing inside decision lag
- The paper analyses publicly available information and data taken from central banks' websites, the IMF, the World Bank, and some indicators proposed in Fernández et al. (2016), Chinn and Ito (2006), Hale et al., 2021, Niedźwiedzińska (2020) and Niedźwiedzińska (2022).

Monetary policy response to COVID-19 was analysed among inflation targeting economies

- 28 inflation targeting countries were chosen for the analysis (14 advanced economies and 14 emerging market economies)
- The period investigated begins around the outbreak of the pandemic and ends in June 2020
- Two main division lines were introduced:
 - distinction between countries at different level of economic development (advanced and emerging market economies)
 - distinction between countries hit by the pandemic in subsequent months (January, February, or March subgroups)

Monetary policy response to COVID-19 was analysed among different sub-groups

Overview of countries analysed

First cases of COVID-19 reported in:									
January*			February			March			
Economy	Country	Country code	Economy	Country	Country code	Economy	Country	Country code	
A	Australia	AU	E	Brazil	BR	E	Chile	CL	
A	Canada	CA	A	Iceland	IS	A	Czech Republic	CZ	
A	Euro Area	EA	A	Israel	IL	E	Hungary	HU	
E	India	IN	E	Mexico	MX	E	Indonesia	ID	
A	Japan	JP	A	New Zealand	NZ	E	Poland	PL	
A	Korea	KR	A	Norway	NO	E	South Africa	ZA	
E	Philippines	PH	E	Romania	RO	E	Turkey	TR	
E	Russia	RU	A	Switzerland	CH	E	Ukraine	UA	
A	Sweden	SE	No. of cases			8	No. of cases		
E	Thailand	TH	No. of advanced economies			5	No. of advanced economies		
A	United Kingdom	GB	No. of emerging market economies			3	No. of emerging market economies		
A	United States	US							
No. of cases		12							
No. of advanced economies		8							
No. of emerging market economies		4							

Source: own compilation based on Niedźwiedzińska (2021).

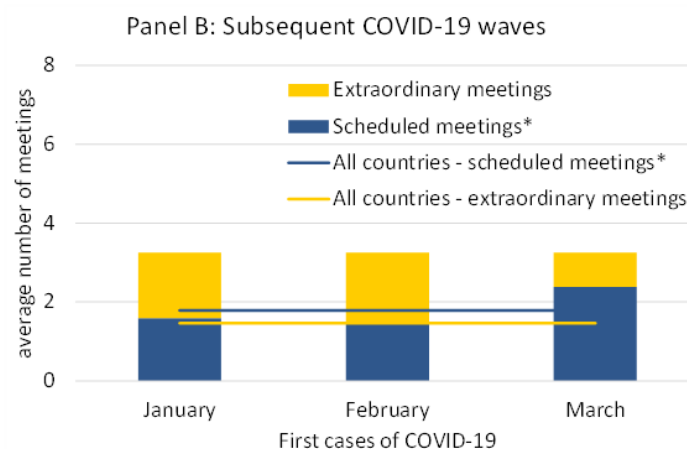
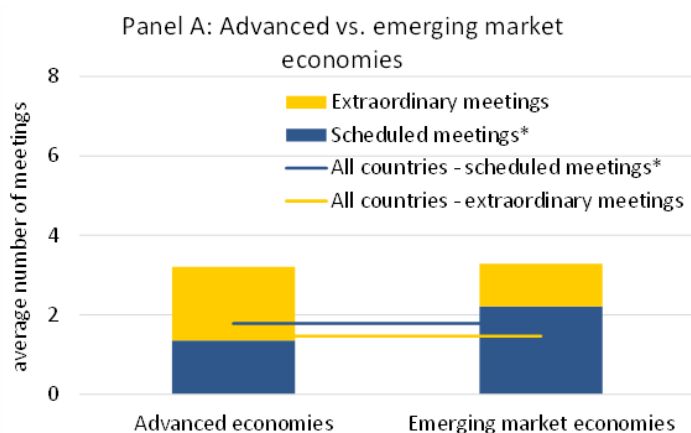
Notes: * Russia and Sweden were included in the January group (the first cases of COVID-19 in those two countries were reported on 1st February 2020, while for other countries included in the February group the first cases of COVID-19 were reported in late February). A denotes advanced economies, while E denotes emerging market economies.

Monetary policy response to COVID-19 showed how central banks addressed the crisis

- The paper shows evidence for:
 - the outstanding number of decision-making meetings held during the first few months of 2020, including extraordinary meetings
 - the unprecedented intensity of announcing new measures or extending the already introduced instruments
 - the wide acceptance of a much broader policy toolkit in countries previously following rather conventional monetary policy
 - a much faster initial policy actions within emerging market economies compared to advanced economies (on average)

Number of decision-making meetings was outstanding

Monetary policy initial response to COVID-19 announced after scheduled and extraordinary decision-making meetings

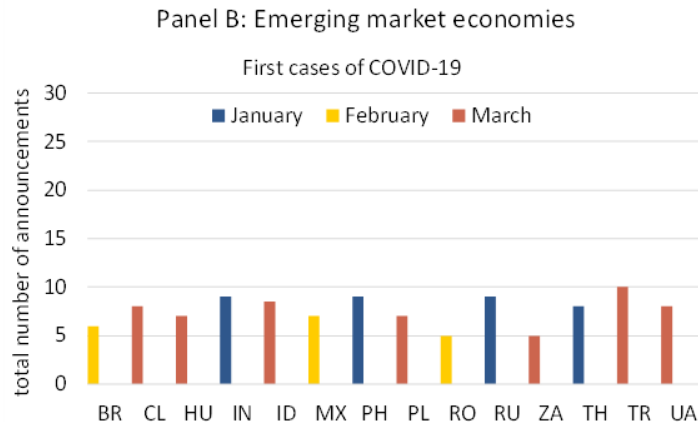
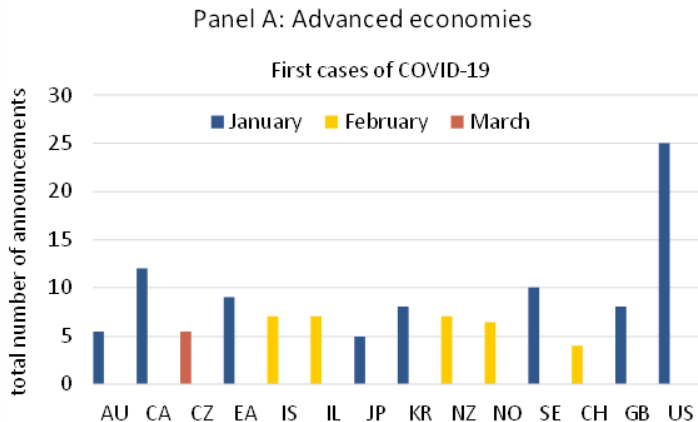


Source: own compilation based on Niedźwiedzińska (2021).

Notes: For each central bank a number of extraordinary meetings and a number of scheduled meetings are noted and based on that averages for all the indicated groups of economies are calculated. * Include rescheduled meetings if announced with prior notice.

Intensity of announcing new measures was unprecedented

Number of monetary policy announcements related to new measures or their extensions in Q1-Q2 2020 in response to COVID-19



Source: own compilation based on Niedźwiedzińska (2021).

Notes: Countries ordered alphabetically based on the full name of the country in English. Each announcement counted separately (e.g. each interest rate cut counted separately). Monetary policy announcements considered in the Chart are counted starting with the first announcement related to COVID-19 and are added up till end-June 2020. Thus, the timeframe varies from country to country.

Advanced economies used a broad policy toolkit

Overview of monetary policy measures used in Q1-Q2 2020 in response to COVID-19

Country	First cases of COVID-19	First monetary policy response*	First response at extraordinary meeting	Cuts in interest rates	New asset purchase programmes (+ extensions)	New credit easing schemes (+ extensions)	Liquidity providing measures	Additional measures **
AU	25-01-2020	3-03-2020		yes	yes	yes	yes	yes
CA	26-01-2020	4-03-2020		yes	yes (+yes)	yes	yes	
CZ	2-03-2020	16-03-2020	yes	yes			yes	yes
EA	25-01-2020	12-03-2020			yes (+yes)	(yes)	yes	
IS	29-02-2020	10-03-2020		yes	yes		yes	yes
IL	24-02-2020	15-03-2020	yes	yes	yes	yes	yes	
JP	15-01-2020	16-03-2020			(yes)	yes	yes	
KR	20-01-2020	12-03-2020		yes	yes	(yes)	yes	yes
NZ	28-02-2020	16-03-2020	yes	yes	yes (+yes)	yes	yes	
NO	27-02-2020	12-03-2020	yes	yes			yes	yes
SE	1-02-2020	12-03-2020	yes		(+yes)	yes (+yes)	yes	
CH	26-02-2020	19-03-2020				yes (+yes)	yes	yes
GB	31-01-2020	11-03-2020	yes	yes	yes	yes (+yes)	yes	yes
US	21-01-2020	3-03-2020	yes	yes	yes (+yes)	yes (+yes)	yes	

Source: own compilation based on Niedźwiedzińska (2021).

Notes: Countries ordered alphabetically based on the full name of the country in English. * Announcement dates. ** Mainly FX interventions and direct financing of government.

Also emerging market economies used a broad policy toolkit

Overview of monetary policy measures used in Q1-Q2 2020 in response to COVID-19

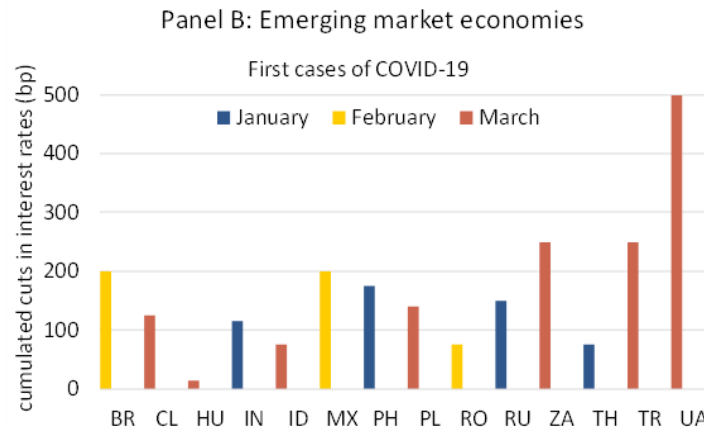
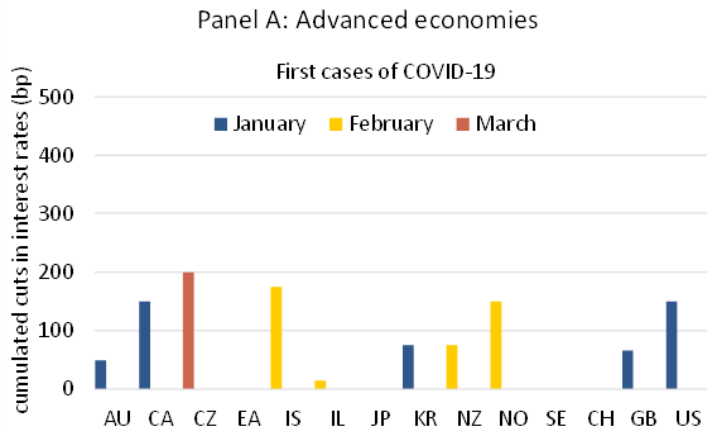
Country	First cases of COVID-19	First monetary policy response*	First response at extraordinary meeting	Cuts in interest rates	New asset purchase programmes (+ extensions)	New credit easing schemes (+ extensions)	Liquidity providing measures	Additional measures **
BR	26-02-2020	6-03-2020		yes			yes	
CL	4-03-2020	12-03-2020		yes	yes (+yes)	yes	yes	
HU	5-03-2020	17-03-2020		yes	yes	yes	yes	
IN	30-01-2020	12-03-2020		yes	yes	yes	yes	yes
ID	2-03-2020	20-02-2020		yes	yes		yes	yes
MX	29-02-2020	20-03-2020	yes	yes		yes	yes	yes
PH	30-01-2020	6-02-2020		yes	yes	yes	yes	yes
PL	4-03-2020	16-03-2020		yes	yes	yes	yes	
RO	27-02-2020	20-03-2020	yes	yes	yes		yes	
RU	1-02-2020	9-03-2020		yes		yes	yes	yes
ZA	6-03-2020	19-03-2020		yes	yes		yes	yes
TH	13-01-2020	5-02-2020		yes	yes	yes	yes	
TR	12-03-2020	17-03-2020	yes	yes	(yes)	yes	yes	
UA	4-03-2020	10-03-2020		yes			yes	yes

Source: own compilation based on Niedźwiedzińska (2021).

Notes: Countries ordered alphabetically based on the full name of the country in English. * Announcement dates. ** Mainly FX interventions and direct financing of government.

Conventional interest rate cuts were a must

Cumulated interest rate cuts in Q1-Q2 2020 in response to COVID-19

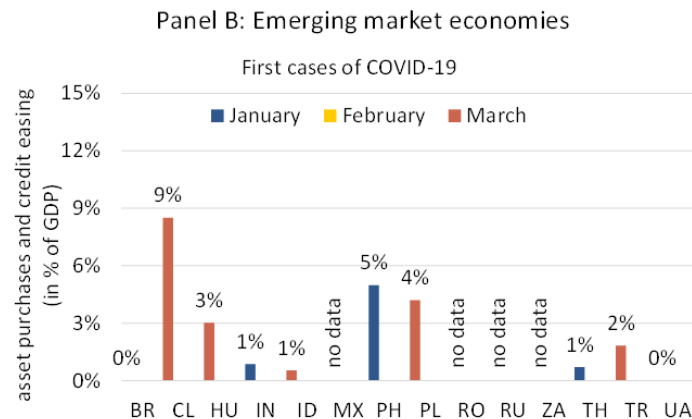
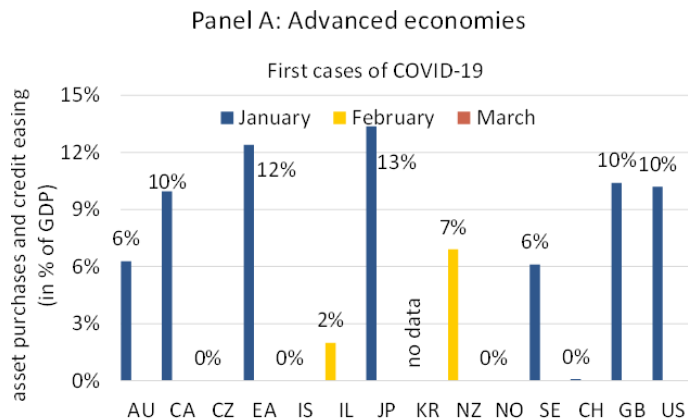


Source: own compilation based on Niedźwiedzińska (2021).

Notes: Countries ordered alphabetically based on the full name of the country in English. Interest rate cuts considered in the Chart are counted starting with the first monetary policy announcement related to COVID-19 and are added up till end-June 2020. Thus, the timeframe varies from country to country.

Unconventional measures were also widely requested

Cumulated value of asset purchases and credit easing measures implemented in Q1-Q2 2020 in response to COVID-19

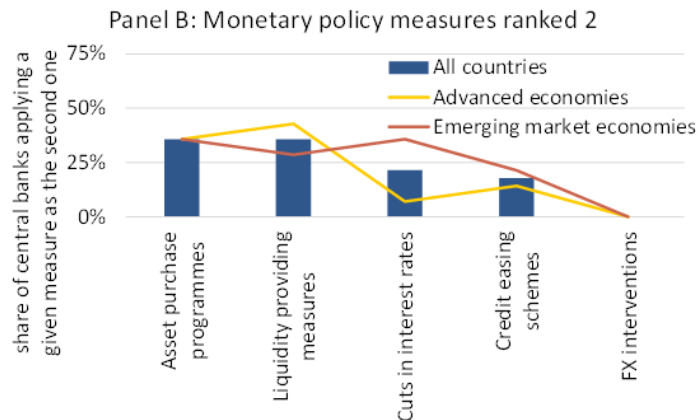
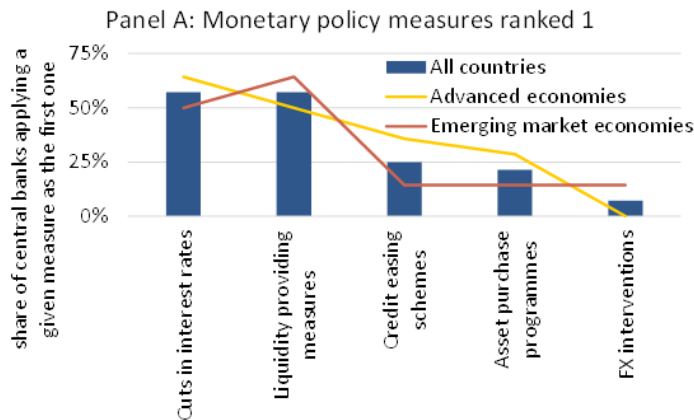


Source: own compilation based on central banks' websites.

Notes: For countries with no asset purchases and no credit easing measures "0%". For countries where no information on asset purchases nor credit easing measures was available "no data". Values of asset purchases and credit easing measures are counted starting with the first monetary policy announcement related to COVID-19 (or the date closest to it – depending on data availability) and are added up till end-June 2020.

Relative preference for certain measures was not homogenous across economies

Order of adopting certain monetary policy measures in Q1-Q2 2020
in response to COVID-19

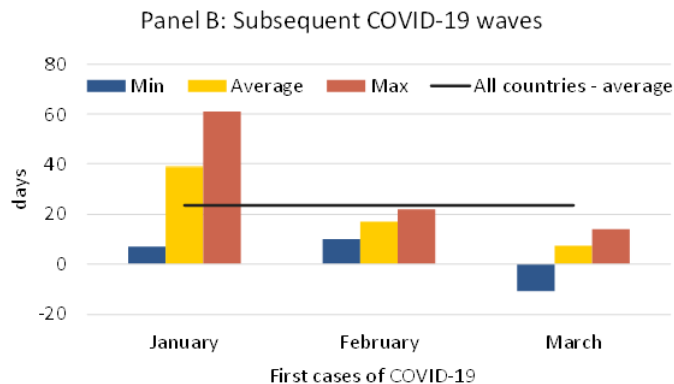
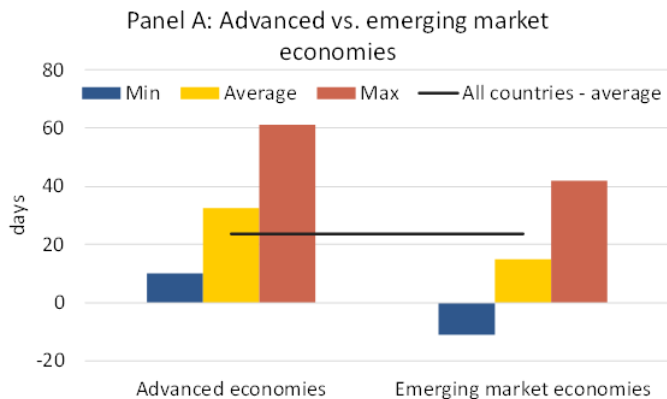


Source: own compilation based on Niedźwiedzińska (2021).

Notes: Asset purchase programmes – new and extended programmes grouped together. Credit easing schemes – new and extended schemes grouped together. Several instruments could be announced contemporaneously, resulting in an equal rank.

Policy response of emerging economies was faster than that of advanced economies

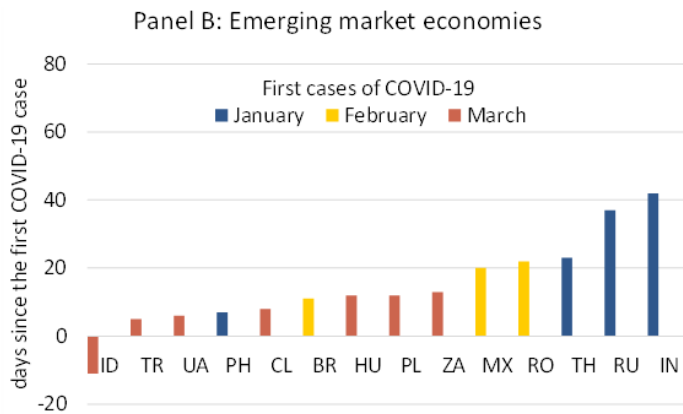
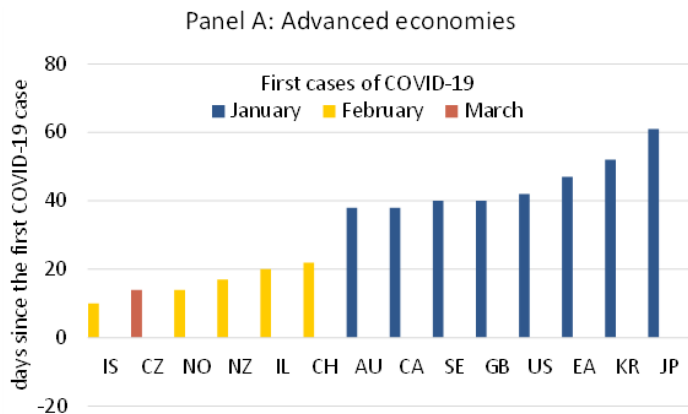
Monetary policy response lag to COVID-19 in different sub-groups of inflation targeters



Source: own compilation based on Niedźwiedzińska (2021).

Timing of policy response clearly depended on subsequent pandemic waves

Overall monetary policy response lag to COVID-19 in individual countries



Source: own compilation based on Niedźwiedzińska (2021).

Timing of policy response could be driven by a number of factors

- The considered hypothesis included:
 - The timing of registering the first infections might have translated into lower/higher awareness of the gravity of situation (a related issue is also how stringent were anti-pandemic restrictions introduced when the pandemic hit)
 - Past policies could mean smaller/bigger room for manoeuvre with respect to both conventional interest rate cuts that could be applied easier than designing more complex policy measures, as well as to using nonstandard measures of relatively simple form
 - It may be the case that emerging market economies were more in need of urgent access to funds, not least due to the higher role of external financing and FX indebtedness in those economies
 - Some monetary policy easing, in particular in smaller economies, might have resulted from spillovers effects

Policy response lag could be explained by several factors

Explaining monetary policy response lag – overview of tentative estimation results

Explanatory variables	Main model	+ Var. related to economic development	+ Var. related to monetary policy			+ Var. related to current economic conditions	+ Var. related to institutional set-up	
Constant	34.7 *** (4.32)	33.85 *** (4.2)	34.17 *** (3.88)	35.62 *** (4.74)	32.91 *** (4.53)	37.19 *** (4.84)	31.38 *** (3.71)	30.38 (1.66)
Start_of_COVID19	-9.94 *** (-3.76)	-9.32 *** (-3.45)	-10 *** (-3.66)	-9.48 *** (-3.82)	-8.76 *** (-3.61)	-10.47 *** (-4.18)	-8.52 ** (-2.84)	-9.92 *** (-3.67)
Stringency_index_infection_week_avg	-0.38 * (-1.79)	-0.42 * (-1.93)	-0.39 * (-1.76)	-0.5 ** (-2.41)	-0.39 * (-2.02)	-0.56 ** (-2.53)	-0.41 * (-1.87)	-0.38 * (-1.75)
Money_to_GDP	0.13 ** (2.69)	0.1 * (2.03)	0.13 ** (2.48)	0.1 * (2.04)	0.09 ** (2.09)	0.13 *** (2.99)	0.14 *** (2.88)	0.12 ** (2.52)
Advanced_economy		4.51 (1.05)						
Interest_rate_level			0.12 (0.17)					
Asset_purchase_past				8.25 * (2.01)				
Credit_easing_past					10.54 ** (2.43)			
CPI_deviation_from_target						2.34 * (1.9)		
Unemployment_rate							-0.1 (-0.28)	
Fully_fledged_IT								0.66 (0.26)
No. of observations	25	25	25	24	25	25	25	25
R-squared	0.76	0.77	0.76	0.80	0.82	0.8	0.77	0.76

Source: own compilation based on Niedźwiedzińska (2021).

Notes: Significance codes: '****' 0.01, '***' 0.05, '**' 0.1. T-statistics in parenthesis

Policy response lag could be explained by several factors (cont.)

- On average, advanced economies announced their initial policy actions within a month, whereas emerging market economies were twice as fast
- However, tentative estimation results indicate that this difference could be, to a great extent, explained by:
 - the timing of registering the first COVID-19 cases in a country
 - stringency of the adopted anti-pandemic restrictions
 - being in need of liquidity provisions with less deep financial system
 - of relevance were also variables related to having room for manoeuvre with respect to nonstandard measures and inflation deviation from the target

Cited literature:

- Chinn, M. D., Ito, H. (2006), “What Matters for Financial Development? Capital Controls, Institutions, and Interactions”, *Journal of Development Economics*, Vol. 81, pp. 163-92. http://web.pdx.edu/~ito/Chinn-Ito_website.htm
- Fernández, A., Klein, M. W., Rebucci, A., Schindler, M., Uribe, M. (2016) “Capital Control Measures: A New Dataset”, *IMF Economic Review*, Vol. 64 (3), pp. 548-74. <http://www.columbia.edu/~mu2166/fkrsu/>
- Hale, T., Angrist, N., Goldszmidt, R., Kira, B., Petherick, A., Phillips, T., Webster, S., Cameron-Blake, E., Hallas, L., Majumdar S., Tatlow, H. (2021), “A Global Panel Database of Pandemic Policies (Oxford COVID-19 Government Response Tracker).” *Nature Human Behaviour*. <https://ourworldindata.org/grapher/covid-stringency-index>
- Niedźwiedzińska, J. (2020), “Inflation Targets – What Factors Can Help to Explain Their Levels”, *Central European Journal of Economic Modelling and Econometrics*, No. 12: 47-89. <http://cejeme.org/publishedarticles/2020-10-13-637197090568117495-2391.pdf>
- Niedźwiedzińska, J. (2020), “Initial monetary policy response to the COVID-19 pandemic in inflation targeting economies”, *NBP Working Papers*, No. 335: https://www.nbp.pl/publikacje/materialy_i_studia/335_en.pdf
- Niedźwiedzińska, J. (2022), *Inflation Targeting and Central Banks: Institutional Set-ups and Monetary Policy Effectiveness*, Routledge.



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