

Master's Thesis

External shocks and central banks' policy

Amina Dahleb

Appendix.

Table 1. Macroeconomic data of eurozone from 2000Q1 to 2021Q4.

Time	Response to shock	GDP growth rate	Unemployment rate	Inflation rate	Current Account in million euro
2000Q1	No	0.042	0.09282733	0.019	-21922
2000Q2	No	0.045	0.09049225	0.019	-30294
2000Q3	No	0.039	0.08894356	0.022	-25024
2000Q4	No	0.034	0.08656144	0.025	-24721
2001Q1	No	0.032	0.08437289	0.021	-17624
2001Q2	No	0.023	0.08381362	0.029	-22181
2001Q3	No	0.019	0.08386902	0.023	1360
2001Q4	No	0.013	0.08465594	0.021	12063
2002Q1	No	0.004	0.08493191	0.025	12040
2002Q2	No	0.009	0.085839	0.021	-5363
2002Q3	No	0.012	0.08736312	0.021	23065
2002Q4	No	0.012	0.08881577	0.023	16239
2003Q1	No	0.008	0.09077264	0.023	-1304
2003Q2	No	0.004	0.09139244	0.02	-10400
2003Q3	No	0.005	0.09135045	0.02	12103
2003Q4	No	0.011	0.09172063	0.021	18750
2004Q1	No	0.019	0.09351544	0.017	14344
2004Q2	No	0.024	0.09344455	0.023	5619
2004Q3	No	0.021	0.09328925	0.023	14030
2004Q4	No	0.017	0.09346122	0.023	23635
2005Q1	No	0.015	0.09247552	0.021	161
2005Q2	No	0.014	0.09285419	0.02	-4002
2005Q3	No	0.019	0.09141718	0.023	4411
2005Q4	No	0.022	0.09055973	0.024	8391
2006Q1	No	0.029	0.08846763	0.023	-11394
2006Q2	No	0.034	0.08561088	0.025	-18131
2006Q3	No	0.032	0.08331601	0.022	-1568
2006Q4	No	0.038	0.08116116	0.018	16406

2007Q1	No	0.035	0.07889115	0.018	2876
2007Q2	No	0.031	0.07616346	0.019	-7673
2007Q3	Yes	0.03	0.07538531	0.019	5984
2007Q4	Yes	0.023	0.07444441	0.029	2598
2008Q1	Yes	0.022	0.07387662	0.034	-61138
2008Q2	Yes	0.011	0.07491099	0.036	-45762
2008Q3	Yes	0.001	0.07649991	0.038	-37378
2008Q4	Yes	-0.022	0.08160411	0.023	-32684
2009Q1	Yes	-0.057	0.09129471	0.01	-35517
2009Q2	Yes	-0.054	0.09691607	0.002	-19388
2009Q3	Yes	-0.045	0.09986522	-0.004	11151
2009Q4	Yes	-0.023	0.1020448	0.004	15110
2010Q1	Yes	0.012	0.10339383	0.011	-23740
2010Q2	Yes	0.022	0.10402924	0.016	-20466
2010Q3	No	0.023	0.10279446	0.017	488
2010Q4	No	0.025	0.102723	0.02	12496
2011Q1	No	0.029	0.10173874	0.025	-39841
2011Q2	No	0.019	0.10096343	0.027	-18155
2011Q3	No	0.016	0.10358376	0.027	-2119
2011Q4	No	0.006	0.10728851	0.029	25218
2012Q1	No	-0.005	0.1105476	0.027	-18099
2012Q2	No	-0.008	0.11396598	0.025	18201
2012Q3	No	-0.01	0.1161564	0.025	39841
2012Q4	No	-0.01	0.11939317	0.023	56341
2013Q1	No	-0.012	0.12193907	0.019	24052
2013Q2	No	-0.004	0.12176085	0.014	47245
2013Q3	No	0.001	0.12108619	0.013	56362
2013Q4	No	0.007	0.12028895	0.008	80255
2014Q1	No	0.015	0.1197482	0.007	30617
2014Q2	No	0.012	0.1170465	0.006	35287
2014Q3	No	0.014	0.11587022	0.004	73605
2014Q4	No	0.015	0.11557741	0.002	98946
2015Q1	No	0.018	0.1132733	-0.003	55479
2015Q2	No	0.02	0.11116749	0.004	36034
2015Q3	No	0.02	0.10758815	0.004	92439
2015Q4	No	0.02	0.10615848	0.003	98548
2016Q1	No	0.019	0.10416614	0.001	55324
2016Q2	No	0.017	0.10238136	-0.001	79297
2016Q3	No	0.017	0.09960605	0.003	93353
2016Q4	No	0.02	0.09815567	0.007	100950
2017Q1	No	0.022	0.09572702	0.017	70454
2017Q2	No	0.027	0.09222069	0.015	31177
2017Q3	No	0.03	0.09000385	0.015	123078
2017Q4	No	0.031	0.08789169	0.014	131318
2018Q1	No	0.024	0.08636382	0.013	81214

2018Q2	No	0.021	0.08335541	0.017	73194
2018Q3	No	0.015	0.08044838	0.021	98929
2018Q4	No	0.012	0.0797758	0.019	87642
2019Q1	No	0.019	0.07837183	0.014	77707
2019Q2	No	0.016	0.0766281	0.014	30293
2019Q3	No	0.018	0.07480184	0.009	109991
2019Q4	Yes	0.011	0.07476775	0.01	59287
2020Q1	Yes	-0.032	0.07379881	0.011	3203
2020Q2	Yes	-0.146	0.07680128	0.002	26948
2020Q3	Yes	-0.04	0.08575213	0	90739
2020Q4	Yes	-0.043	0.08265835	-0.003	100702
2021Q1	Yes	-0.009	0.08190898	0.01	74776
2021Q2	Yes	0.146	0.08026892	0.018	68534
2021Q3	Yes	0.04	0.07509776	0.029	89465
2021Q4	Yes	0.046	0.07103263	0.047	83964

Source : European Central Bank database.

Table 2. Monetary policy instruments during period 1 and period 2.

Time	Response to shock	ECB key interest rate period 1	ECB asset purchase period 1 in million euro	ECB asset purchase period 2 in million euro	ECB funding for lending period 2 in million euro
2000Q1	No	0	0	0	0
2000Q2	No	0	0	0	0
2000Q3	No	0	0	0	0
2000Q4	No	0	0	0	0
2001Q1	No	0	0	0	0
2001Q2	No	0	0	0	0
2001Q3	No	0	0	0	0
2001Q4	No	0	0	0	0
2002Q1	No	0	0	0	0
2002Q2	No	0	0	0	0
2002Q3	No	0	0	0	0
2002Q4	No	0	0	0	0
2003Q1	No	0	0	0	0
2003Q2	No	0	0	0	0
2003Q3	No	0	0	0	0
2003Q4	No	0	0	0	0
2004Q1	No	0	0	0	0
2004Q2	No	0	0	0	0
2004Q3	No	0	0	0	0
2004Q4	No	0	0	0	0
2005Q1	No	0	0	0	0

2005Q2	No	0	0	0	0
2005Q3	No	0	0	0	0
2005Q4	No	0	0	0	0
2006Q1	No	0	0	0	0
2006Q2	No	0	0	0	0
2006Q3	No	0	0	0	0
2006Q4	No	0	0	0	0
2007Q1	No	0	0	0	0
2007Q2	No	0	0	0	0
2007Q3	Yes	0.05	0	0	0
2007Q4	Yes	0.05	0	0	0
2008Q1	Yes	0.05	0	0	0
2008Q2	Yes	0.05	0	0	0
2008Q3	Yes	0.0525	0	0	0
2008Q4	Yes	0.04	0	0	0
2009Q1	Yes	0.03	0	0	0
2009Q2	Yes	0.0225	0	0	0
2009Q3	Yes	0.0175	16856	0	0
2009Q4	Yes	0.0175	14252	0	0
2010Q1	Yes	0.0175	13790	0	0
2010Q2	Yes	0.0175	15102	0	0
2010Q3	No	0	0	0	0
2010Q4	No	0	0	0	0
2011Q1	No	0	0	0	0
2011Q2	No	0	0	0	0
2011Q3	No	0	0	0	0
2011Q4	No	0	0	0	0
2012Q1	No	0	0	0	0
2012Q2	No	0	0	0	0
2012Q3	No	0	0	0	0
2012Q4	No	0	0	0	0
2013Q1	No	0	0	0	0
2013Q2	No	0	0	0	0
2013Q3	No	0	0	0	0
2013Q4	No	0	0	0	0
2014Q1	No	0	0	0	0
2014Q2	No	0	0	0	0
2014Q3	No	0	0	0	0
2014Q4	No	0	0	0	0
2015Q1	No	0	0	0	0
2015Q2	No	0	0	0	0
2015Q3	No	0	0	0	0
2015Q4	No	0	0	0	0
2016Q1	No	0	0	0	0
2016Q2	No	0	0	0	0

2016Q3	No	0	0	0	0
2016Q4	No	0	0	0	0
2017Q1	No	0	0	0	0
2017Q2	No	0	0	0	0
2017Q3	No	0	0	0	0
2017Q4	No	0	0	0	0
2018Q1	No	0	0	0	0
2018Q2	No	0	0	0	0
2018Q3	No	0	0	0	0
2018Q4	No	0	0	0	0
2019Q1	No	0	0	0	0
2019Q2	No	0	0	0	0
2019Q3	No	0	0	0	0
2019Q4	Yes	0	0	0	3.4
2020Q1	Yes	0	0	15444	97.72
2020Q2	Yes	0	0	339542	114.92
2020Q3	Yes	0	0	212197	1308.43
2020Q4	Yes	0	0	189983	174.46
2021Q1	Yes	0	0	186481	50.41
2021Q2	Yes	0	0	240986	330.92
2021Q3	Yes	0	0	227658	110.35
2021Q4	Yes	0	0	185275	98.81

Source : European Central Bank website and database

Table 3. Macroeconomic and monetary policy data for Norway, from 2003Q1 to 2021 Q4.

Time	Response to shock	GDP growth rate	Inflation rate Adjusted Tax	Unemployment rate	Current Account	NB key interest rate
2003Q1	No	0	0.0053333	0.04	56973	0
2003Q2	No	-0.005	-0.005333	0.042	48034	0
2003Q3	No	0.014	0.0016667	0.044	42407	0
2003Q4	No	0	0.0003333	0.043	58494	0
2004Q1	No	0.035	0	0.042	61935	0
2004Q2	No	0.002	0.0006667	0.042	56149	0
2004Q3	No	-0.012	0.001	0.044	53689	0
2004Q4	No	0.01	0.0003333	0.044	63106	0
2005Q1	No	0.016	-0.000333	0.044	77533	0
2005Q2	No	0.005	0.0036667	0.046	72895	0
2005Q3	No	0.008	0.0016667	0.046	76106	0
2005Q4	No	0.002	0	0.044	91695	0
2006Q1	No	0.006	0.0016667	0.039	112345	0
2006Q2	No	0.001	0.0026667	0.037	91343	0
2006Q3	No	0.01	0.0033333	0.033	85435	0
2006Q4	No	0.018	-0.001667	0.028	86173	0

2007Q1	No	0.001	-0.001333	0.027	81823	0
2007Q2	No	0	0.0003333	0.025	72066	0
2007Q3	Yes	0.013	0.0006667	0.025	69223	0.045
2007Q4	Yes	0.011	0.0096667	0.025	92110	0.05
2008Q1	Yes	-0.013	0	0.025	115188	0.0525
2008Q2	Yes	0	0.0006667	0.026	122020	0.055
2008Q3	Yes	-0.002	0.0076667	0.029	102522	0.0575
2008Q4	Yes	0.003	-0.001667	0.031	102016	0.0475
2009Q1	Yes	-0.008	0.0013333	0.03	76137	0.0225
2009Q2	Yes	-0.009	0.0036667	0.033	60736	0.02
2009Q3	Yes	0.001	0	0.033	58525	0.0125
2009Q4	Yes	0.001	0.0013333	0.035	81851	0.015
2010Q1	Yes	0.02	0.006	0.039	89503	0.0175
2010Q2	Yes	-0.011	-0.001	0.039	61197	0.0175
2010Q3	No	-0.025	-0.000333	0.036	52364	0
2010Q4	No	0.028	0.0046667	0.037	88999	0
2011Q1	No	0.001	-0.000667	0.032	89712	0
2011Q2	No	-0.004	0	0.034	88625	0
2011Q3	No	0.016	0.0006667	0.034	83220	0
2011Q4	No	0.001	0	0.035	97988	0
2012Q1	No	0.022	0.0023333	0.032	131948	0
2012Q2	No	0.002	-0.001667	0.032	93753	0
2012Q3	No	-0.014	0.001	0.032	70031	0
2012Q4	No	0.008	0.003	0.036	93966	0
2013Q1	No	0.002	0.002	0.037	97006	0
2013Q2	No	0.007	0.001	0.037	74173	0
2013Q3	No	0.01	0.0026667	0.038	65944	0
2013Q4	No	-0.002	0.0006667	0.038	96034	0
2014Q1	No	0.005	0.002	0.035	103687	0
2014Q2	No	0.007	0.0006667	0.033	65155	0
2014Q3	No	0.004	0.0036667	0.038	42978	0
2014Q4	No	0.012	0	0.038	81202	0
2015Q1	No	-0.003	0.002	0.043	57958	0
2015Q2	No	0.005	0.0033333	0.044	40310	0
2015Q3	No	0.012	0.0013333	0.046	39013	0
2015Q4	No	-0.009	0.0013333	0.048	41438	0
2016Q1	No	0.001	0.0046667	0.05	24090	0
2016Q2	No	0	0.0043333	0.048	4257	0
2016Q3	No	-0.003	0.0013333	0.048	2968	0
2016Q4	No	0.013	0.0006667	0.045	30015	0
2017Q1	No	0.01	0.0016667	0.043	45616	0
2017Q2	No	0.01	0.0026667	0.045	19386	0
2017Q3	No	0.007	0.0006667	0.041	19430	0
2017Q4	No	-0.006	0.0006667	0.04	30958	0
2018Q1	No	0.008	0.0023333	0.039	58937	0

2018Q2	No	0.003	0.004	0.039	35740	0
2018Q3	No	0.006	0.003	0.04	53756	0
2018Q4	No	0	0.001	0.037	55340	0
2019Q1	No	-0.003	0.002	0.038	45648	0
2019Q2	No	0.002	0.0006667	0.034	1930	0
2019Q3	No	0.002	0.0016667	0.037	-15794	0
2019Q4	Yes	0.014	0.0003333	0.04	21020	0.015
2020Q1	Yes	-0.013	-0.000333	0.035	9663	0.015
2020Q2	Yes	-0.047	0.0036667	0.046	-26250	0.0025
2020Q3	Yes	0.045	0.003	0.053	-18556	0
2020Q4	Yes	0.006	0	0.05	6497	0
2021Q1	Yes	0	0.0056667	0.047	63570	0
2021Q2	Yes	0.008	0.0016667	0.05	63574	0
2021Q3	Yes	0.039	0.007	0.04	131596	0
2021Q4	Yes	0.001	0.008	0.035	257468	0.0025

Sources : Norges bank for key interest rate and SSB for macroeconomic data