**CORE MODELS**

**THAT WE HAVE**

**EAGLE**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Mavromatis 2. Smadu | * 4 country DSGE (two countries in EA, US, RoW) * Price and Wage stickiness * Only US bonds traded Internationally * Tradables & Non-tradables | * Policy experiments * Suitable for scenarios that include FG, occasionally binding ZLB * MP/FP interactions |

**THAT WE NEED TO DEVELOP**

**Large Macro VAR**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| Bonomolo,  Stanga | Main macro variables including a labor market block and a financial market block; ELB and unconventional monetary policy. | Estimating the main economic drivers and their implications on monetary policy |

**Infrastructure for model combination**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| Bonomolo | Technique by Canova and Matthes (2018) based on Composite likelihood to combine information from different models. | * Estimate key objects (for example the slope of the Phillips curve) * Forecasting * Combining results from satellite and core models |

**NAWMII**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| Mavromatis | * Two country DSGE (EA and RoW) * Financial Frictions * Price and Wage stickiness | * Estimation * Use estimated parameters for scenario analysis. |

**SATELLITE MODELS THAT ARE LIKELY TO BE RUN EVERY TIME**

**THAT WE HAVE**

**Two-country BVAR** [(Brandt et al, 2021)](https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2560~f98f3c7d78.en.pdf?557af6dae576cddfaffba73700e7f6b7)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy 2. Klaver, Kho, Overbeek | HD of daily 10-year EA OIS rate, EA stocks, US stocks, EURUSD EXR and the 10-year OIS treasury spread | Dissecting recent movements on financial markets into key drivers |

**Term and Inflation risk premia**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy 2. Klaver, vd End | * Decomposition of OIS and ILS curve into expectations component and premia * [Diebold and Li (2006)](https://www.sciencedirect.com/science/article/pii/S0304407605000795), [Joslin et al (2013, RFS)](http://www.mit.edu/~zhuh/JSZ_2011_RFS.pdf), [Adrian et al (2013)](https://www.sciencedirect.com/science/article/pii/S0304405X13001335) and others. |  |

**THAT WE NEED TO DEVELOP**

**Structural HANK model for monetary policy**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| Haber, Colciago, Bonam(?), Smadu(?) | DSGE model with Heterogenous consumers | Simulate scenarios whenever heterogeneity of consumers (MPC) and distributional issues matter |

**OCCASIONAL SATELLITE MODELS**

**THAT WE HAVE**

**Natural rate of interest / natural yield curve** [(Brand, Goy and Lemke, 2021)](https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2612~672f094742.en.pdf)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy 2. Mavromatis | * Neutral real and nominal interest rate * Natural yield curve * US and euro area * Term premia | Assessing monetary stance |

**Oil price VAR**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy 2. Klaver, Kho, Overbeek | HD of daily oil prices | Decomposing oil price movements into demand and supply |

**Supply side VAR**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy 2. Klaver, Kho, Overbeek | HD of monthly PMI indexes for the Netherlands, the euro area and the global economy | Decomposing PMIs into demand and supply |

**Sectoral inflation BVAR**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Smadu 2. Bonam | * HD of aggregate and sectoral inflation * EA and NL |  |

**Four variable Macro VAR** [(Maas, Hoeberichts and Stanga, 2018)](https://tasks.sharepoint.dnb.nl/sites/EBO/AlgemeneEconomie/_layouts/15/WopiFrame2.aspx?sourcedoc=/sites/EBO/AlgemeneEconomie/Beleid1/The%20exchange%20rate%20pass-through%20in%20the%20euro%20area.docx&action=default&DefaultItemOpen=1)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Stanga 2. Goy | * HD of quarterly inflation, REER, real GDP and the shadow rate * Quarterly data | Historical decompositions of quarterly inflation and REER into demand, supply, MP and terms-of-trade shocks. |

**Measuring the broadness of inflation** [(Ascari, Hoebericht, vd Heijden and Wisse, 2021)](https://tasks.sharepoint.dnb.nl/sites/EBO/MonetairBeleid/Beleid1/How%20broad-based%20is%20Euro%20area%20inflation.docx)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Hoebericht | * monthly COICOP-series | Measure of broadness of inflation: contribution to inflation by expenditure share |

**Fair yield estimates** [(De Haan, Hessel and vd End, 2014, JIMF)](http://dx.doi.org/10.1016/j.jimonfin.2014.06.001)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. vd End | * Panel regressions based * Multiple EA countries | Fair yield estimates for several EA countries to assess whether sovereign spreads deviate from fundamentals |

**Fair yield estimates** [(Dewachter et al, 2015, JBF)](https://www.sciencedirect.com/science/article/pii/S0378426614000946)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Goy | * Two market term structure model * Multiple EA countries | Fair yield estimates for several EA countries to assess whether sovereign spreads deviate from fundamentals |

**Shadow rates estimates** [Krippner (2011, EL)](https://www.sciencedirect.com/science/article/pii/S016517651200554X) and [Wu and Xia (2016, JMCB)](https://doi.org/10.1111/jmcb.12300)

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Admiraal | * Available online at [Krippner’s homepage](https://www.ljkmfa.com/?s=ssr) or that of [Cynthia Wu](https://sites.google.com/view/jingcynthiawu/shadow-rates). | Mapping UMP into a hypothetical short term policy rate |

**Financial market uncertainty** [(Nalban and Smadu, 2021](https://www.sciencedirect.com/science/article/pii/S0164070421000379))

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. Smadu | * BVAR with regime switching and time-varying volatility * Model-based uncertainty measure for the EA and/or US * Broader than usual VIX and VSTOXX measures of implied stock market volatility; also include financing conditions | Assessing financial market uncertainty |

**Zombification of Dutch firms**

|  |  |  |
| --- | --- | --- |
| OWNERS | Main Features | Main purpose |
| 1. De Winter 2. Bun | * Firm level panel data model for Dutch NFCs * Annual data set | Annual indicators of misallocation & zombification |

**THAT WE NEED TO DEVELOP**