Model 1 Equations

Core World Stochastic Trends

$$\rho_t^{\omega,\text{tr}} = \rho_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\rho,\omega} \tag{1}$$
$$\pi_t^{\omega,\text{tr}} = \pi_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\pi,\omega} \tag{2}$$

Core Common Factors for Deviations

$$f_t^{\rho,\text{dev}} = f_{t-1}^{\rho,\text{dev}} + \epsilon_t^{f,\rho} \tag{3}$$
$$f_t^{\pi,\text{dev}} = f_{t-1}^{\pi,\text{dev}} + \epsilon_t^{f,\pi} \tag{4}$$

Core Idiosyncratic Deviation Trends

$$\rho_t^{\text{US, idio, tr}} = \rho_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\rho,\text{US, idio}} \tag{5}$$
$$\pi_t^{\text{US, idio, tr}} = \pi_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\pi,\text{US, idio}} \tag{6}$$
$$\rho_t^{\text{EA, idio, tr}} = \rho_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\rho,\text{EA, idio}} \tag{7}$$
$$\pi_t^{\text{EA, idio, tr}} = \pi_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\pi,\text{EA, idio}} \tag{8}$$
$$\rho_t^{\text{JP, idio, tr}} = \rho_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\rho,\text{JP, idio}} \tag{9}$$
$$\pi_t^{\text{JP, idio, tr}} = \pi_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\pi,\text{JP, idio}} \tag{10}$$

Derived Full Deviation Trends (Factor model structure)

$$\rho_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\rho,\text{dev}} + \rho_t^{\text{US, idio, tr}} \tag{11}$$
$$\pi_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\pi,\text{dev}} + \pi_t^{\text{US, idio, tr}} \tag{12}$$
$$\rho_t^{\text{EA, dev, tr}} = \lambda_{f^\rho}^{\rho,\text{EA}} f_t^{\rho,\text{dev}} + \rho_t^{\text{EA, idio, tr}} \tag{13}$$
$$\pi_t^{\text{EA, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{EA}} f_t^{\pi,\text{dev}} + \pi_t^{\text{EA, idio, tr}} \tag{14}$$
$$\rho_t^{\text{JP, dev, tr}} = \lambda_{f^\rho}^{\rho,\text{JP}} f_t^{\rho,\text{dev}} + \rho_t^{\text{JP, idio, tr}} \tag{15}$$
$$\pi_t^{\text{JP, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{JP}} f_t^{\pi,\text{dev}} + \pi_t^{\text{JP, idio, tr}} \tag{16}$$

Derived Full Real Rate and Inflation Trends

$$\rho_t^{\text{US, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{US, dev, tr}} \tag{17}$$
$$\pi_t^{\text{US, full, tr}} = \lambda^{\pi,\text{US}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{US, dev, tr}} \tag{18}$$
$$\rho_t^{\text{EA, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{EA, dev, tr}} \tag{19}$$
$$\pi_t^{\text{EA, full, tr}} = \lambda^{\pi,\text{EA}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{EA, dev, tr}} \tag{20}$$
$$\rho_t^{\text{JP, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{JP, dev, tr}} \tag{21}$$
$$\pi_t^{\text{JP, full, tr}} = \lambda^{\pi,\text{JP}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{JP, dev, tr}} \tag{22}$$

Core Country-Specific Output Growth Trends (Euler Equations)

$$\gamma_t^{\text{US, tr}} = \frac{1}{\phi_{\text{US}}} \rho_t^{\text{US, full, tr}} + \epsilon_t^{\gamma,\text{US}} \tag{23}$$
$$\gamma_t^{\text{EA, tr}} = \frac{1}{\phi_{\text{EA}}} \rho_t^{\text{EA, full, tr}} + \epsilon_t^{\gamma,\text{EA}} \tag{24}$$
$$\gamma_t^{\text{JP, tr}} = \frac{1}{\phi_{\text{JP}}} \rho_t^{\text{JP, full, tr}} + \epsilon_t^{\gamma,\text{JP}} \tag{25}$$

Derived Full Nominal Short Rate Trends

$$R_t^{\text{US, sh, tr}} = \rho_t^{\text{US, full, tr}} + \pi_t^{\text{US, full, tr}} \tag{26}$$

$$R_t^{\text{EA, sh, tr}} = \rho_t^{\text{EA, full, tr}} + \pi_t^{\text{EA, full, tr}} \tag{27}$$

$$R_t^{\text{JP, sh, tr}} = \rho_t^{\text{JP, full, tr}} + \pi_t^{\text{JP, full, tr}} \tag{28}$$

Model 2 Equations

Core World Stochastic Trends

$$\rho_t^{\omega,\text{tr}} = \rho_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\rho,\omega} \tag{29}$$
$$\pi_t^{\omega,\text{tr}} = \pi_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\pi,\omega} \tag{30}$$
$$\tau_t^{\omega,\text{tr}} = \tau_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\tau,\omega} \tag{31}$$

Core Common Factors for Deviations

$$f_t^{\rho,\text{dev}} = f_{t-1}^{\rho,\text{dev}} + \epsilon_t^{f,\rho} \tag{32}$$
$$f_t^{\pi,\text{dev}} = f_{t-1}^{\pi,\text{dev}} + \epsilon_t^{f,\pi} \tag{33}$$
$$f_t^{\tau,\text{dev}} = f_{t-1}^{\tau,\text{dev}} + \epsilon_t^{f,\tau} \tag{34}$$

Core Idiosyncratic Deviation Trends

$$\rho_t^{\text{US, idio, tr}} = \rho_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\rho,\text{US, idio}} \tag{35}$$
$$\pi_t^{\text{US, idio, tr}} = \pi_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\pi,\text{US, idio}} \tag{36}$$
$$\tau_t^{\text{US, idio, tr}} = \tau_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\tau,\text{US, idio}} \tag{37}$$
$$\rho_t^{\text{EA, idio, tr}} = \rho_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\rho,\text{EA, idio}} \tag{38}$$
$$\pi_t^{\text{EA, idio, tr}} = \pi_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\pi,\text{EA, idio}} \tag{39}$$
$$\tau_t^{\text{EA, idio, tr}} = \tau_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\tau,\text{EA, idio}} \tag{40}$$
$$\rho_t^{\text{JP, idio, tr}} = \rho_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\rho,\text{JP, idio}} \tag{41}$$
$$\pi_t^{\text{JP, idio, tr}} = \pi_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\pi,\text{JP, idio}} \tag{42}$$
$$\tau_t^{\text{JP, idio, tr}} = \tau_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\tau,\text{JP, idio}} \tag{43}$$

Derived Full Deviation Trends (Factor model structure)

$$\rho_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\rho,\text{dev}} + \rho_t^{\text{US, idio, tr}} \tag{44}$$
$$\pi_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\pi,\text{dev}} + \pi_t^{\text{US, idio, tr}} \tag{45}$$
$$\tau_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\tau,\text{dev}} + \tau_t^{\text{US, idio, tr}} \tag{46}$$
$$\rho_t^{\text{EA, dev, tr}} = \lambda_{f^\rho}^{\rho,\text{EA}} f_t^{\rho,\text{dev}} + \rho_t^{\text{EA, idio, tr}} \tag{47}$$
$$\pi_t^{\text{EA, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{EA}} f_t^{\pi,\text{dev}} + \pi_t^{\text{EA, idio, tr}} \tag{48}$$
$$\tau_t^{\text{EA, dev, tr}} = \lambda_{f^\tau}^{\tau,\text{EA}} f_t^{\tau,\text{dev}} + \tau_t^{\text{EA, idio, tr}} \tag{49}$$
$$\rho_t^{\text{JP, dev, tr}} = \lambda_{f^\rho}^{\rho,\text{JP}} f_t^{\rho,\text{dev}} + \rho_t^{\text{JP, idio, tr}} \tag{50}$$
$$\pi_t^{\text{JP, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{JP}} f_t^{\pi,\text{dev}} + \pi_t^{\text{JP, idio, tr}} \tag{51}$$
$$\tau_t^{\text{JP, dev, tr}} = \lambda_{f^\tau}^{\tau,\text{JP}} f_t^{\tau,\text{dev}} + \tau_t^{\text{JP, idio, tr}} \tag{52}$$

Derived Full Real Rate and Inflation Trends

$$\rho_t^{\text{US, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{US, dev, tr}} \tag{53}$$
$$\pi_t^{\text{US, full, tr}} = \lambda^{\pi,\text{US}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{US, dev, tr}} \tag{54}$$
$$\rho_t^{\text{EA, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{EA, dev, tr}} \tag{55}$$
$$\pi_t^{\text{EA, full, tr}} = \lambda^{\pi,\text{EA}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{EA, dev, tr}} \tag{56}$$
$$\rho_t^{\text{JP, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{JP, dev, tr}} \tag{57}$$
$$\pi_t^{\text{JP, full, tr}} = \lambda^{\pi,\text{JP}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{JP, dev, tr}} \tag{58}$$

Core Country-Specific Output Growth Trends (Euler Equations)

$$\gamma_t^{\text{US, tr}} = \frac{1}{\phi_{\text{US}}} \rho_t^{\text{US, full, tr}} + \epsilon_t^{\gamma,\text{US}} \tag{59}$$

$$\gamma_t^{\text{EA, tr}} = \frac{1}{\phi_{\text{EA}}} \rho_t^{\text{EA, full, tr}} + \epsilon_t^{\gamma,\text{EA}} \tag{60}$$

$$\gamma_t^{\text{JP, tr}} = \frac{1}{\phi_{\text{JP}}} \rho_t^{\text{JP, full, tr}} + \epsilon_t^{\gamma,\text{JP}} \tag{61}$$

Derived Full Nominal Short & Long Rate Trends

$$R_t^{\text{US, sh, tr}} = \rho_t^{\text{US, full, tr}} + \pi_t^{\text{US, full, tr}} \tag{62}$$

$$R_t^{\text{US, lg, tr}} = R_t^{\text{US, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{US, dev, tr}} \tag{63}$$

$$R_t^{\text{EA, sh, tr}} = \rho_t^{\text{EA, full, tr}} + \pi_t^{\text{EA, full, tr}} \tag{64}$$

$$R_t^{\text{EA, lg, tr}} = R_t^{\text{EA, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{EA, dev, tr}} \tag{65}$$

$$R_t^{\text{JP, sh, tr}} = \rho_t^{\text{JP, full, tr}} + \pi_t^{\text{JP, full, tr}} \tag{66}$$

$$R_t^{\text{JP, lg, tr}} = R_t^{\text{JP, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{JP, dev, tr}} \tag{67}$$

Model 3 Equations

Core World Stochastic Trends (Random Walks)

$$\rho_t^{\omega,\text{tr}} = \rho_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\rho,\omega} \tag{68}$$
$$\pi_t^{\omega,\text{tr}} = \pi_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\pi,\omega} \tag{69}$$
$$\tau_t^{\omega,\text{tr}} = \tau_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\tau,\omega} \tag{70}$$

Core Country-Specific Stochastic Deviation Trends (Random Walks)

$$\rho_t^{\text{US, dev, tr}} = \rho_{t-1}^{\text{US, dev, tr}} + \epsilon_t^{\rho,\text{US, dev}} \tag{71}$$
$$\pi_t^{\text{US, dev, tr}} = \pi_{t-1}^{\text{US, dev, tr}} + \epsilon_t^{\pi,\text{US, dev}} \tag{72}$$
$$\tau_t^{\text{US, dev, tr}} = \tau_{t-1}^{\text{US, dev, tr}} + \epsilon_t^{\tau,\text{US, dev}} \tag{73}$$
$$\rho_t^{\text{EA, dev, tr}} = \rho_{t-1}^{\text{EA, dev, tr}} + \epsilon_t^{\rho,\text{EA, dev}} \tag{74}$$
$$\pi_t^{\text{EA, dev, tr}} = \pi_{t-1}^{\text{EA, dev, tr}} + \epsilon_t^{\pi,\text{EA, dev}} \tag{75}$$
$$\tau_t^{\text{EA, dev, tr}} = \tau_{t-1}^{\text{EA, dev, tr}} + \epsilon_t^{\tau,\text{EA, dev}} \tag{76}$$
$$\rho_t^{\text{JP, dev, tr}} = \rho_{t-1}^{\text{JP, dev, tr}} + \epsilon_t^{\rho,\text{JP, dev}} \tag{77}$$
$$\pi_t^{\text{JP, dev, tr}} = \pi_{t-1}^{\text{JP, dev, tr}} + \epsilon_t^{\pi,\text{JP, dev}} \tag{78}$$
$$\tau_t^{\text{JP, dev, tr}} = \tau_{t-1}^{\text{JP, dev, tr}} + \epsilon_t^{\tau,\text{JP, dev}} \tag{79}$$

Derived Full Real Rate and Inflation Trends

$$\rho_t^{\text{US, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{US, dev, tr}} \tag{80}$$
$$\pi_t^{\text{US, full, tr}} = \lambda^{\pi,\text{US}}\pi_t^{\omega,\text{tr}} + \pi_t^{\text{US, dev, tr}} \tag{81}$$
$$\rho_t^{\text{EA, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{EA, dev, tr}} \tag{82}$$
$$\pi_t^{\text{EA, full, tr}} = \lambda^{\pi,\text{EA}}\pi_t^{\omega,\text{tr}} + \pi_t^{\text{EA, dev, tr}} \tag{83}$$
$$\rho_t^{\text{JP, full, tr}} = \rho_t^{\omega,\text{tr}} + \rho_t^{\text{JP, dev, tr}} \tag{84}$$
$$\pi_t^{\text{JP, full, tr}} = \lambda^{\pi,\text{JP}}\pi_t^{\omega,\text{tr}} + \pi_t^{\text{JP, dev, tr}} \tag{85}$$

Core Country-Specific Output Growth Trends (Shocked Euler Equations)

$$\gamma_t^{\text{US, tr}} = \frac{1}{\phi_{\text{US}}}\rho_t^{\text{US, full, tr}} + \epsilon_t^{\gamma,\text{US}} \tag{86}$$
$$\gamma_t^{\text{EA, tr}} = \frac{1}{\phi_{\text{EA}}}\rho_t^{\text{EA, full, tr}} + \epsilon_t^{\gamma,\text{EA}} \tag{87}$$
$$\gamma_t^{\text{JP, tr}} = \frac{1}{\phi_{\text{JP}}}\rho_t^{\text{JP, full, tr}} + \epsilon_t^{\gamma,\text{JP}} \tag{88}$$

Derived Full Nominal Short & Long Rate Trends

$$R_t^{\text{US, sh, tr}} = \rho_t^{\text{US, full, tr}} + \pi_t^{\text{US, full, tr}} \tag{89}$$
$$R_t^{\text{US, lg, tr}} = R_t^{\text{US, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{US, dev, tr}} \tag{90}$$
$$R_t^{\text{EA, sh, tr}} = \rho_t^{\text{EA, full, tr}} + \pi_t^{\text{EA, full, tr}} \tag{91}$$
$$R_t^{\text{EA, lg, tr}} = R_t^{\text{EA, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{EA, dev, tr}} \tag{92}$$
$$R_t^{\text{JP, sh, tr}} = \rho_t^{\text{JP, full, tr}} + \pi_t^{\text{JP, full, tr}} \tag{93}$$
$$R_t^{\text{JP, lg, tr}} = R_t^{\text{JP, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{JP, dev, tr}} \tag{94}$$

Model 4 Equations

Core World Stochastic Trends

$$m_t^{\omega,\text{tr}} = m_{t-1}^{\omega,\text{tr}} + \epsilon_t^{m,\omega} \tag{95}$$
$$\xi_t^{\omega,\text{tr}} = \xi_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\xi,\omega} \tag{96}$$
$$\pi_t^{\omega,\text{tr}} = \pi_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\pi,\omega} \tag{97}$$
$$\tau_t^{\omega,\text{tr}} = \tau_{t-1}^{\omega,\text{tr}} + \epsilon_t^{\tau,\omega} \tag{98}$$

Implicit world SAFE real rate trend

$$r_t^{\omega,\text{safe, tr}} = m_t^{\omega,\text{tr}} - \xi_t^{\omega,\text{tr}} \tag{99}$$

Core Common Factors for Deviations

$$f_t^{\xi,\text{dev}} = f_{t-1}^{\xi,\text{dev}} + \epsilon_t^{f,\xi} \tag{100}$$
$$f_t^{\pi,\text{dev}} = f_{t-1}^{\pi,\text{dev}} + \epsilon_t^{f,\pi} \tag{101}$$
$$f_t^{\tau,\text{dev}} = f_{t-1}^{\tau,\text{dev}} + \epsilon_t^{f,\tau} \tag{102}$$

Core Idiosyncratic Deviation Trends

$$\xi_t^{\text{US, idio, tr}} = \xi_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\xi,\text{US, idio}} \tag{103}$$
$$\pi_t^{\text{US, idio, tr}} = \pi_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\pi,\text{US, idio}} \tag{104}$$
$$\tau_t^{\text{US, idio, tr}} = \tau_{t-1}^{\text{US, idio, tr}} + \epsilon_t^{\tau,\text{US, idio}} \tag{105}$$
$$\xi_t^{\text{EA, idio, tr}} = \xi_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\xi,\text{EA, idio}} \tag{106}$$
$$\pi_t^{\text{EA, idio, tr}} = \pi_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\pi,\text{EA, idio}} \tag{107}$$
$$\tau_t^{\text{EA, idio, tr}} = \tau_{t-1}^{\text{EA, idio, tr}} + \epsilon_t^{\tau,\text{EA, idio}} \tag{108}$$
$$\xi_t^{\text{JP, idio, tr}} = \xi_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\xi,\text{JP, idio}} \tag{109}$$
$$\pi_t^{\text{JP, idio, tr}} = \pi_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\pi,\text{JP, idio}} \tag{110}$$
$$\tau_t^{\text{JP, idio, tr}} = \tau_{t-1}^{\text{JP, idio, tr}} + \epsilon_t^{\tau,\text{JP, idio}} \tag{111}$$

Derived Full Deviation Trends (Factor model structure)

$$\xi_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\xi,\text{dev}} + \xi_t^{\text{US, idio, tr}} \tag{112}$$
$$\pi_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\pi,\text{dev}} + \pi_t^{\text{US, idio, tr}} \tag{113}$$
$$\tau_t^{\text{US, dev, tr}} = 1.0 \cdot f_t^{\tau,\text{dev}} + \tau_t^{\text{US, idio, tr}} \tag{114}$$
$$\xi_t^{\text{EA, dev, tr}} = \lambda_{f^\xi}^{\xi,\text{EA}} f_t^{\xi,\text{dev}} + \xi_t^{\text{EA, idio, tr}} \tag{115}$$
$$\pi_t^{\text{EA, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{EA}} f_t^{\pi,\text{dev}} + \pi_t^{\text{EA, idio, tr}} \tag{116}$$
$$\tau_t^{\text{EA, dev, tr}} = \lambda_{f^\tau}^{\tau,\text{EA}} f_t^{\tau,\text{dev}} + \tau_t^{\text{EA, idio, tr}} \tag{117}$$
$$\xi_t^{\text{JP, dev, tr}} = \lambda_{f^\xi}^{\xi,\text{JP}} f_t^{\xi,\text{dev}} + \xi_t^{\text{JP, idio, tr}} \tag{118}$$
$$\pi_t^{\text{JP, dev, tr}} = \lambda_{f^\pi}^{\pi,\text{JP}} f_t^{\pi,\text{dev}} + \pi_t^{\text{JP, idio, tr}} \tag{119}$$
$$\tau_t^{\text{JP, dev, tr}} = \lambda_{f^\tau}^{\tau,\text{JP}} f_t^{\tau,\text{dev}} + \tau_t^{\text{JP, idio, tr}} \tag{120}$$

Derived Full SAFE Real Rate and Inflation Trends

$$r_t^{\text{US, safe, full, tr}} = r_t^{\omega,\text{safe, tr}} + \xi_t^{\text{US, dev, tr}} \tag{121}$$
$$\pi_t^{\text{US, full, tr}} = \lambda^{\pi,\text{US}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{US, dev, tr}} \tag{122}$$
$$r_t^{\text{EA, safe, full, tr}} = r_t^{\omega,\text{safe, tr}} + \xi_t^{\text{EA, dev, tr}} \tag{123}$$
$$\pi_t^{\text{EA, full, tr}} = \lambda^{\pi,\text{EA}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{EA, dev, tr}} \tag{124}$$
$$r_t^{\text{JP, safe, full, tr}} = r_t^{\omega,\text{safe, tr}} + \xi_t^{\text{JP, dev, tr}} \tag{125}$$
$$\pi_t^{\text{JP, full, tr}} = \lambda^{\pi,\text{JP}} \pi_t^{\omega,\text{tr}} + \pi_t^{\text{JP, dev, tr}} \tag{126}$$

Core Country-Specific Output Growth Trends (Euler Equations, use SAFE real rates)

$$\gamma_t^{\text{US, tr}} = \frac{1}{\phi_{\text{US}}} r_t^{\text{US, safe, full, tr}} + \epsilon_t^{\gamma,\text{US}} \tag{127}$$
$$\gamma_t^{\text{EA, tr}} = \frac{1}{\phi_{\text{EA}}} r_t^{\text{EA, safe, full, tr}} + \epsilon_t^{\gamma,\text{EA}} \tag{128}$$
$$\gamma_t^{\text{JP, tr}} = \frac{1}{\phi_{\text{JP}}} r_t^{\text{JP, safe, full, tr}} + \epsilon_t^{\gamma,\text{JP}} \tag{129}$$

Derived Full Nominal SAFE Short & Long Rate Trends

$$R_t^{\text{US, safe, sh, tr}} = r_t^{\text{US, safe, full, tr}} + \pi_t^{\text{US, full, tr}} \tag{130}$$
$$R_t^{\text{US, safe, lg, tr}} = R_t^{\text{US, safe, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{US, dev, tr}} \tag{131}$$
$$R_t^{\text{EA, safe, sh, tr}} = r_t^{\text{EA, safe, full, tr}} + \pi_t^{\text{EA, full, tr}} \tag{132}$$
$$R_t^{\text{EA, safe, lg, tr}} = R_t^{\text{EA, safe, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{EA, dev, tr}} \tag{133}$$
$$R_t^{\text{JP, safe, sh, tr}} = r_t^{\text{JP, safe, full, tr}} + \pi_t^{\text{JP, full, tr}} \tag{134}$$
$$R_t^{\text{JP, safe, lg, tr}} = R_t^{\text{JP, safe, sh, tr}} + \tau_t^{\omega,\text{tr}} + \tau_t^{\text{JP, dev, tr}} \tag{135}$$

US Baa Corporate Bond Rate Trend

$$\rho_t^{\text{US, Baa, tr}} = m_t^{\omega,\text{tr}} \tag{136}$$
$$R_t^{\text{US, Baa, tr}} = \rho_t^{\text{US, Baa, tr}} + \pi_t^{\text{US, full, tr}} \tag{137}$$