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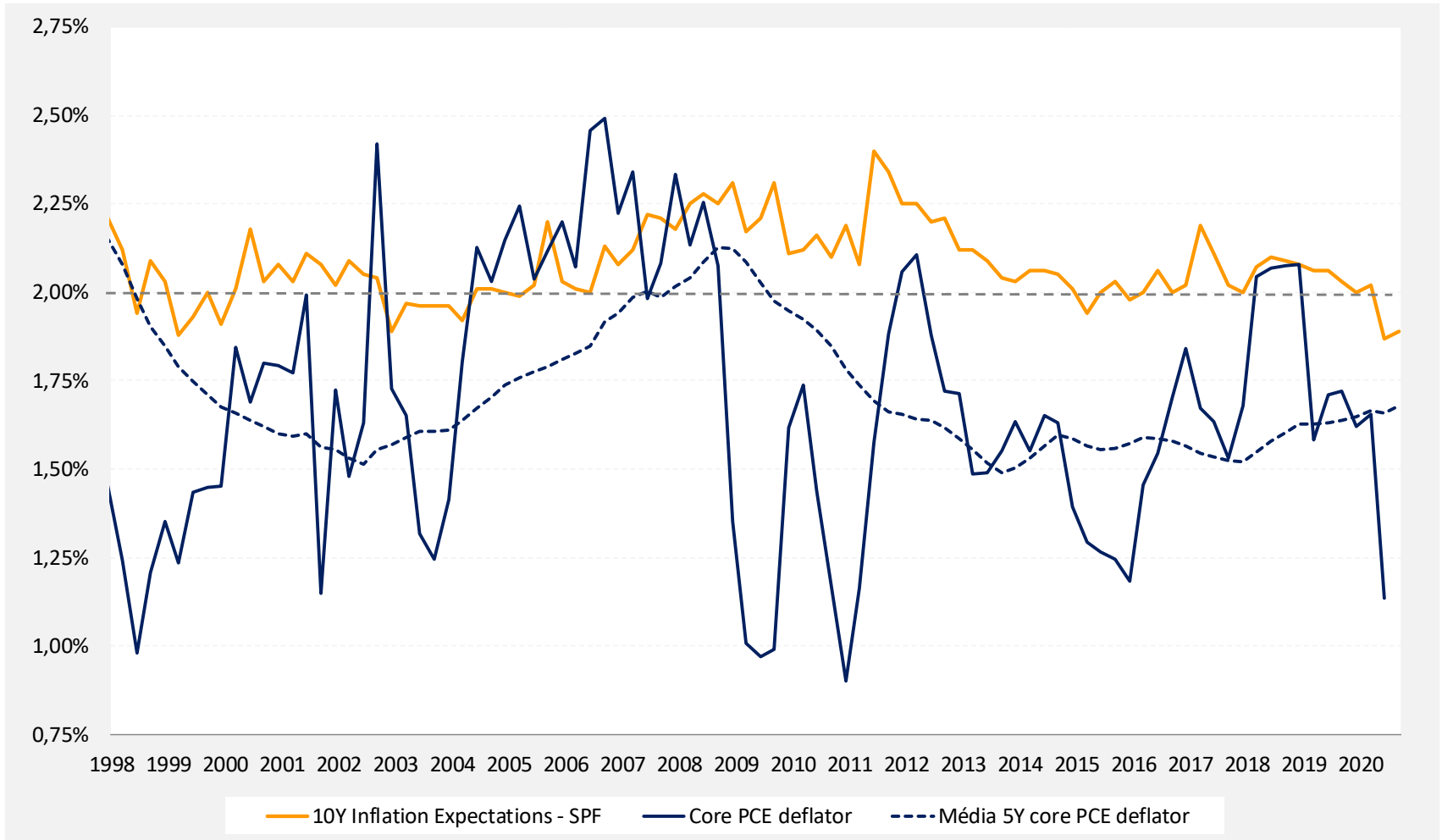
# FAIT – Flexible Average Inflation Target

# FIT: problemas e limitações

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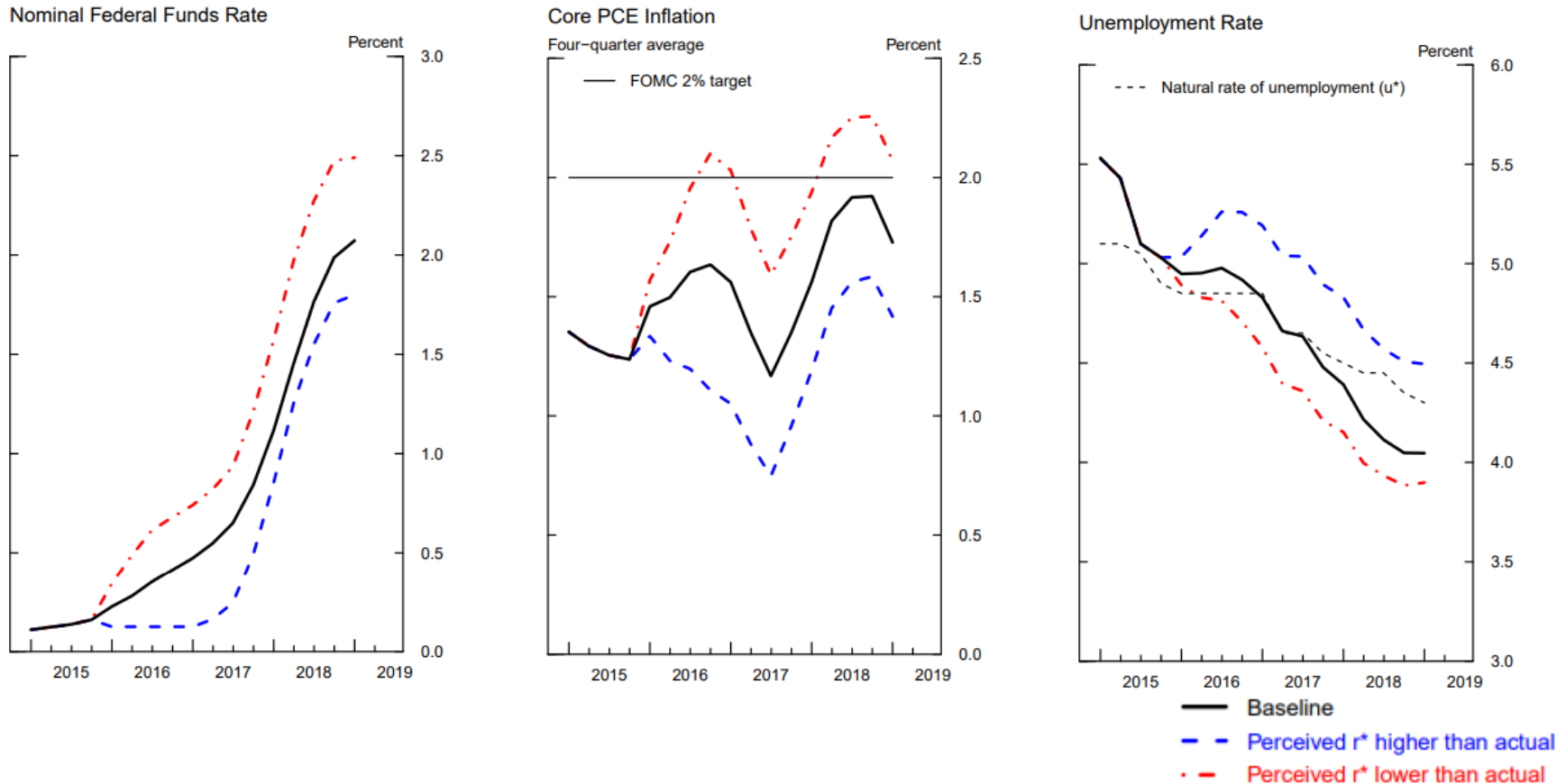
- **Estabilidade financeira:**
  - Postura de pol mon adequada do ponto de vista de FIT poderia levar a exageros nos mercados de ativos, origens da GFC, meta ampla (BIS)?
- **Meta ou teto:** desvios persistentes para baixo (sem perspectiva de compensação) podem levar a queda das expectativas de inflação e alta da taxa de juros real
- **Problema cambial (Brasil):** “o regime até que é bom, só não resolve o problema do câmbio...”

# Inflação e expectativas abaixo de 2% desde 2008



# r\* baixo, PC flat: dificuldade de atingir, principalmente, objetivo de preços

- Resultados com  $r^*$  em queda maior do que a esperada

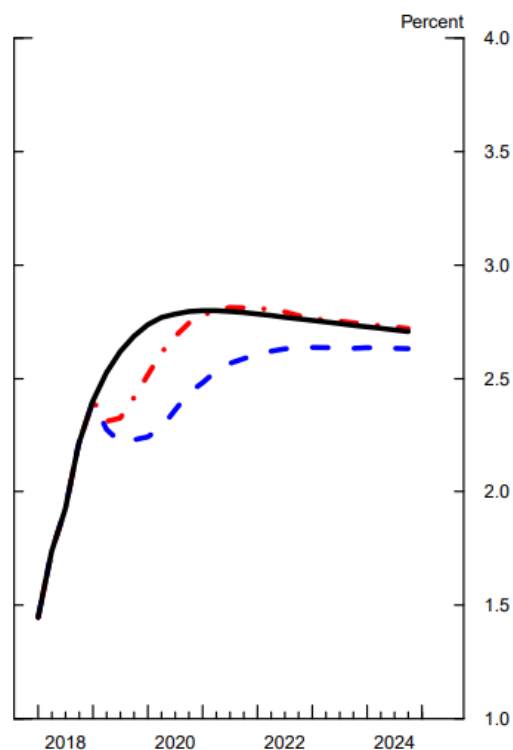


Fonte: [Monetary Policy Tradeoffs and the Federal Reserve's Dual Mandate](#)

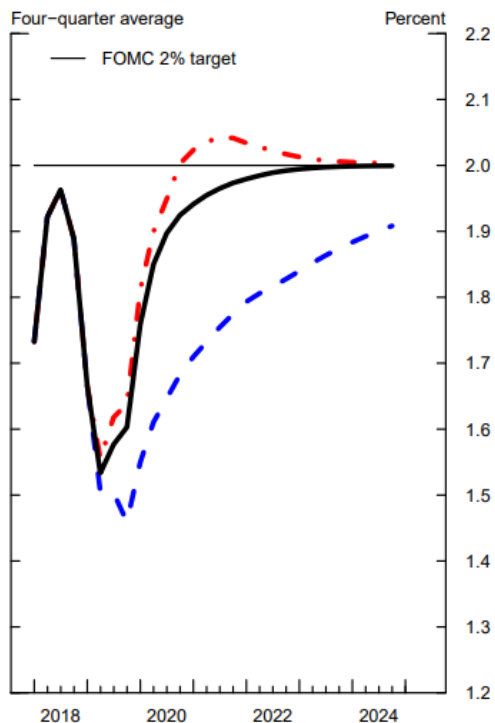
# r\* baixo, PC flat: dificuldade de atingir, principalmente, objetivo de preços

- Resultados com PC flat e expectativas desancoradas

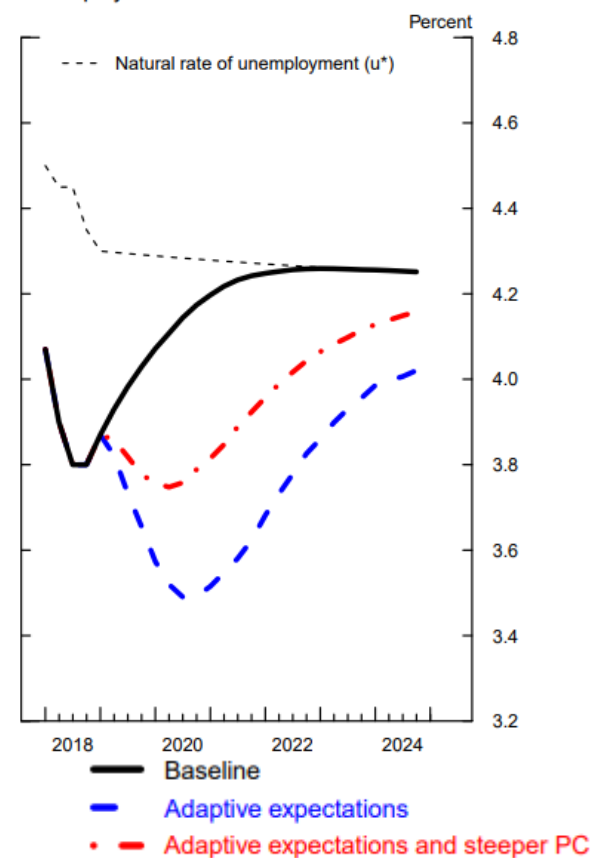
Nominal Federal Funds Rate



Core PCE Inflation



Unemployment Rate



Fonte: [Monetary Policy Tradeoffs and the Federal Reserve's Dual Mandate](#)

# Risco de ELB alto, mesmo antes do Covid-19

- Effective lower bound risk:

	Probability of ELB by 2021:Q4	Probability of ELB by 2024:Q4	Probability of ELB by 2029:Q4
<b>Time-series models</b>			
Del Negro and others (2017)	21	35	51
Johannsen and Mertens (2018)	4	14	28
Lubik and Matthes (2015)	2	7	12
<b>DSGE models</b>			
FRB Chicago, $r^{LR} = 0.5$	13	23	41
FRB Chicago, $r^{LR} = 1.0$	7	15	29
FRB Chicago, $r^{LR} = 1.5$	4	9	19
FRB New York, $r^{LR} = 1.9$	24	39	51
FRB/US model (June 2019 SEP, $r^{LR} = 0.5$ )	27	48	68
<i>Addendum</i>			
Survey of Primary Dealers (Median, July 2019)	35	n.a.	n.a.

Fonte: [Strengthening the FOMC's Framework in View of the Effective Lower Bound and Some Considerations Related to Time-Inconsistent Strategies](#)

# FIT: Função Objetivo Anterior

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- **Estabilidade de Preços:**
  - “The Committee reaffirms its judgment that inflation at the rate of 2 percent... would be concerned if inflation were running persistently above or below this objective”
  - let bygones be bygones
- **Emprego:** “mitigate **deviations** of employment from the Committee’s assessments of its maximum level”
- **Estabilidade financeira:** “the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals”

Fonte: [https://www.federalreserve.gov/monetarypolicy/files/FOMC\\_LongerRunGoals\\_20160126.pdf](https://www.federalreserve.gov/monetarypolicy/files/FOMC_LongerRunGoals_20160126.pdf)

# FAIT: Nova Função Objetivo

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- **Estabilidade de Preços:**
  - **Average Inflation Target:** “seeks to achieve inflation that averages 2 percent...”
  - **Flexible and Asymmetric:** “...over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time”
- **Máximo Emprego:** “mitigate **shortfalls** of employment from the Committee's assessment of its maximum level”
- **Estabilidade financeira:** “the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals”

Fonte: [https://www.federalreserve.gov/monetarypolicy/files/FOMC\\_LongerRunGoals.pdf](https://www.federalreserve.gov/monetarypolicy/files/FOMC_LongerRunGoals.pdf)



## Nova “Regra” de Policy....

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- Anterior: Responde a desvios da inflação corrente e desvios emprego

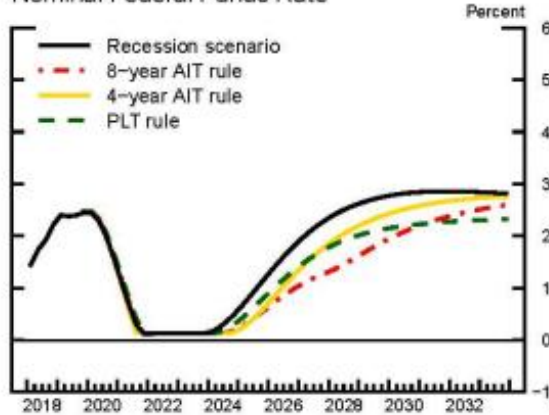
$$ELB \text{ ou } R_t = r^* + \pi_t + 0.5(\pi_t - \pi^*) - (u_t - u^*)$$

- Nova: Responde a “desvios” da inflação “média”, quando persistentemente abaixo de 2%, e “shortfall” emprego

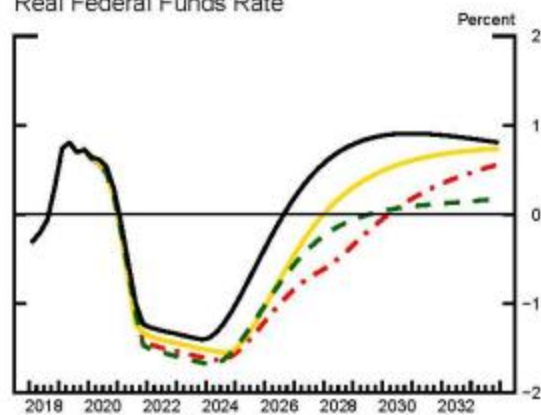
$$ELB \text{ ou } R_t = \begin{cases} r^* + \pi_t + \alpha(\bar{\pi}_t - \pi^*) - \max(0, u_t - u^*) & \text{if } \bar{\pi}_t < \pi^* \\ r^* + \pi_t + \alpha(\pi_t - \pi^*) - \max(0, u_t - u^*) & \text{if } \bar{\pi}_t \geq \pi^* \end{cases}$$

# ....confirma estímulos prolongados pós recessão

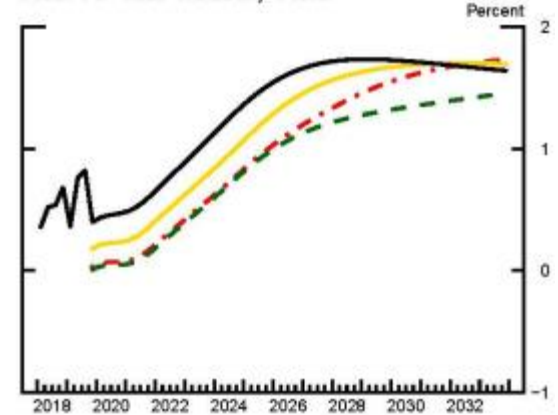
Nominal Federal Funds Rate



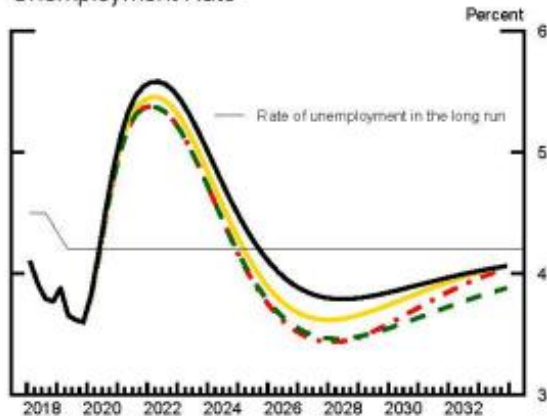
Real Federal Funds Rate



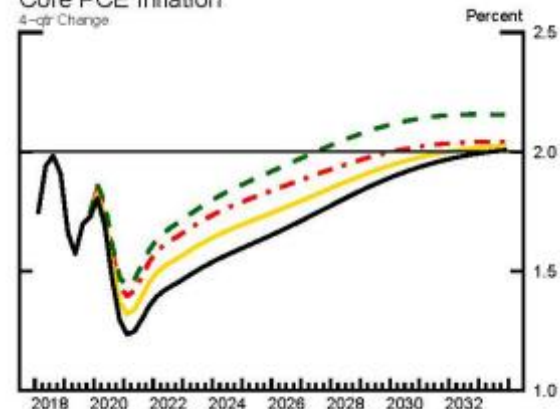
Real 10-Year Treasury Yield



Unemployment Rate



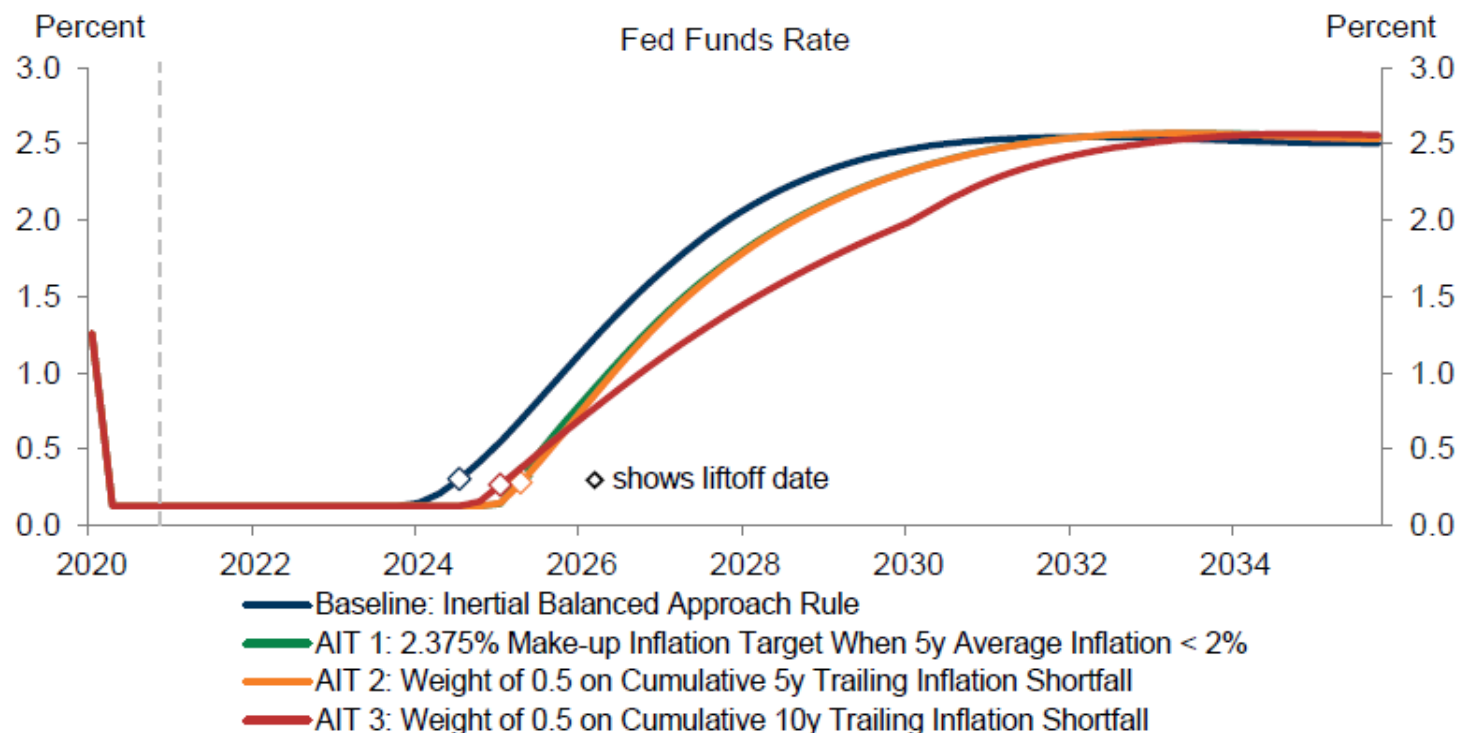
Core PCE Inflation  
4-yr Change



Fonte: [Alternative Strategies: How Do They Work? How Might They Help? Simulations for “mild recession”](#)

# GS estima FFR em 0% até 2025 (2024 c/ Taylor rule tradicional)

Under the FOMC's Latest Economic Forecasts, AIT Policies Would Imply Liftoff Around Early 2025



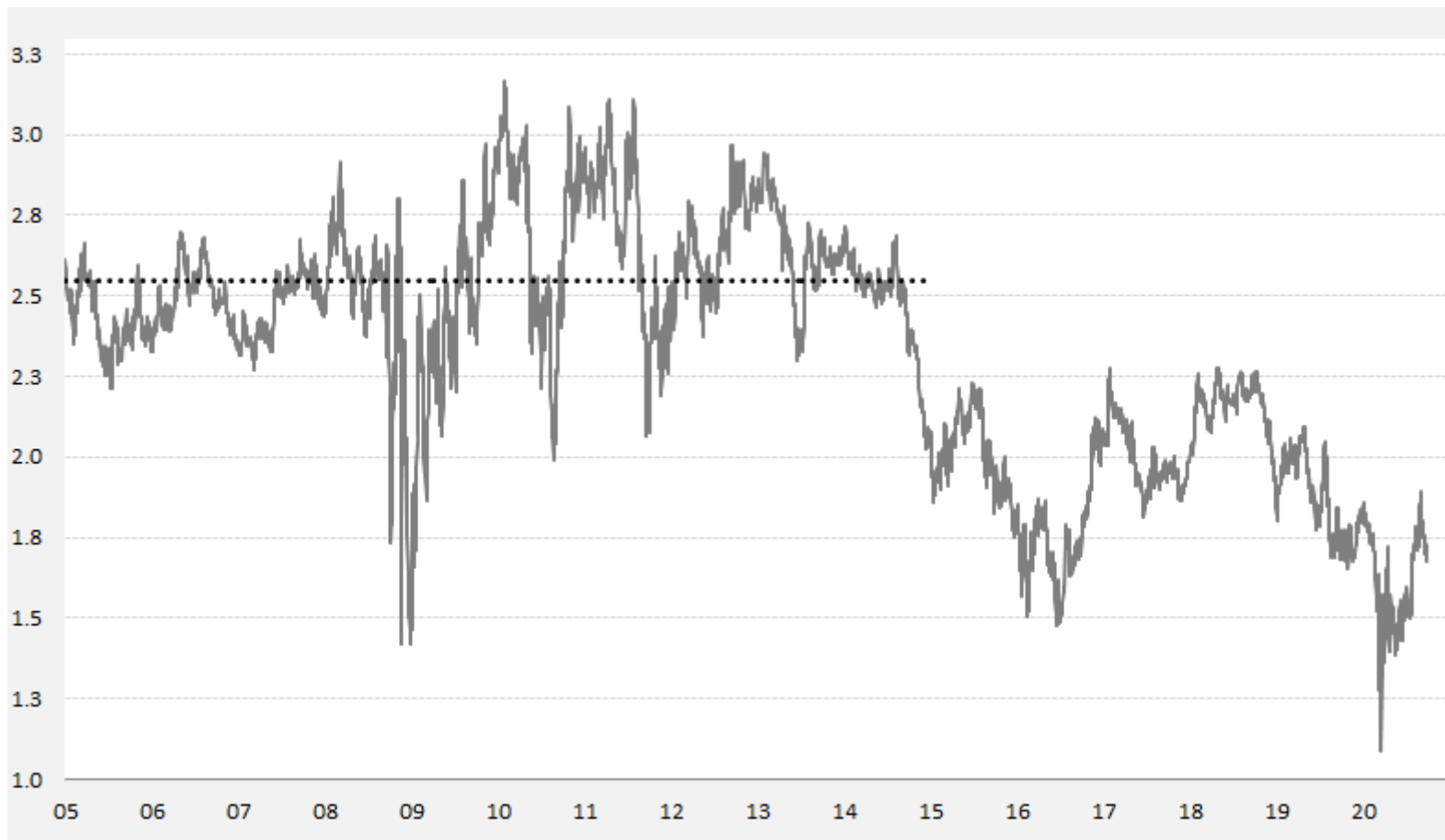
Fonte: Goldman Sachs Economics Research - The Fed's New Framework

## Pós GFC, alta de juros foi 5-7 anos após recessão, porém mais cedo no ciclo ( $u > u^*$ e $PCE < 2\%$ )

Início do ciclo	Juros		Unemployment			Inflação	
	FFR	tamanho ciclo (bps)	U3	$\Delta$ -12m	Nairu	Core PCE YoY	Core PCE YoY (média 4 anos)
jan/87	5,88%	388	6,6%	-0,1%	6,0%	2,9%	4,2%
fev/94	3,00%	300	6,6%	-0,5%	5,5%	2,2%	3,3%
jun/99	4,75%	175	4,3%	-0,2%	5,3%	1,3%	1,7%
jul/04	1,00%	425	5,5%	-0,7%	5,0%	2,1%	1,7%
dez/15	0,13%	225	5,0%	-0,6%	4,6%	1,2%	1,6%

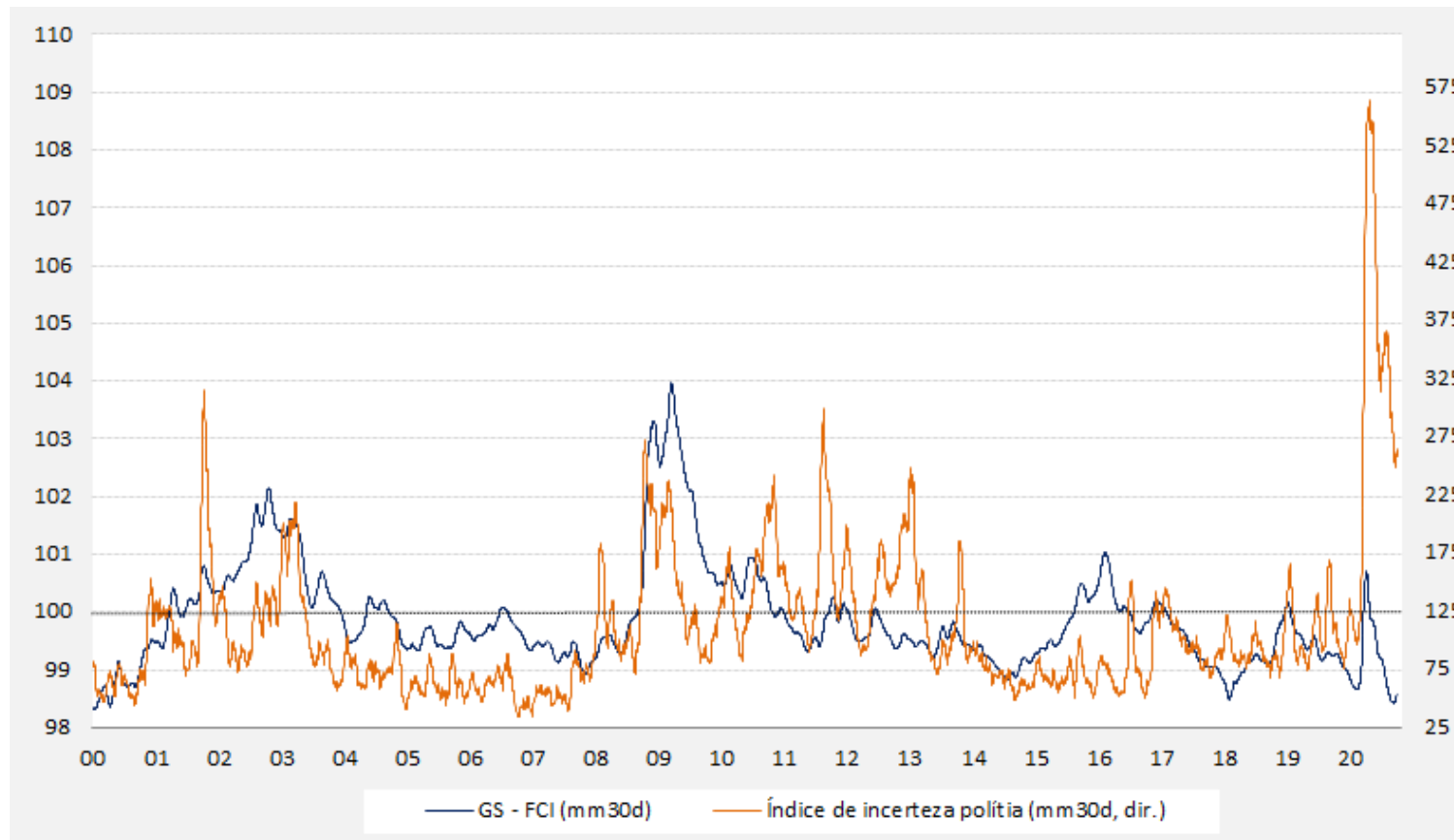
## Mas feito em expectativas inflação ainda modesto. Por que?

- Inflação implícita 5y5y subiu da mínima de abril/maio, mas permanece 70bps abaixo da média pré 2014



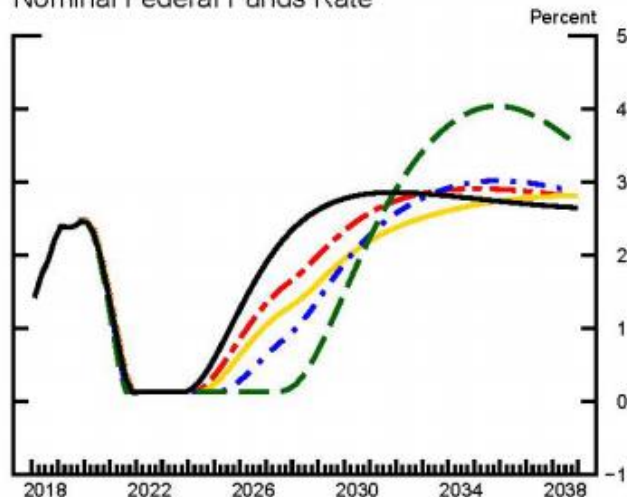
# (1) Recuperação gradual com incertezas ainda elevadas, mesmo com política monetária ultra-estimulativa

- FCI Goldman Sachs
- Índice de incerteza política Baker, Bloom e Davis



## (2) Precificação de ativos na direção do AIT ajuda, mas dificuldade do público de assimilar mudança do Fed limita ganhos....

Nominal Federal Funds Rate



— Recession baseline

AIT com compreensão:

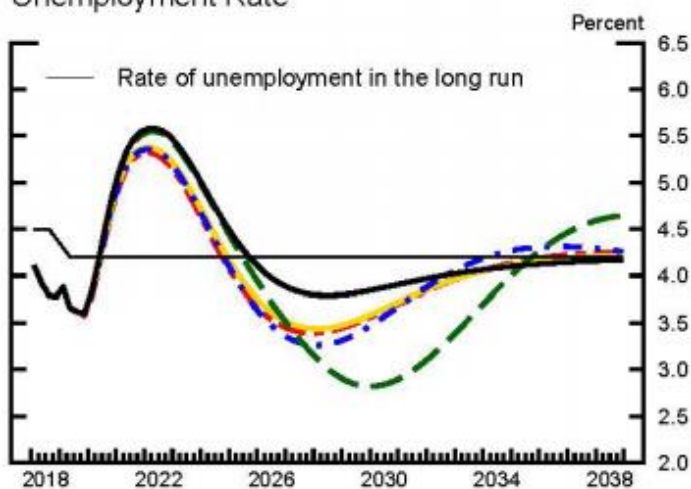
--- Generalizada

— De empresas, trabalhadores e mercado

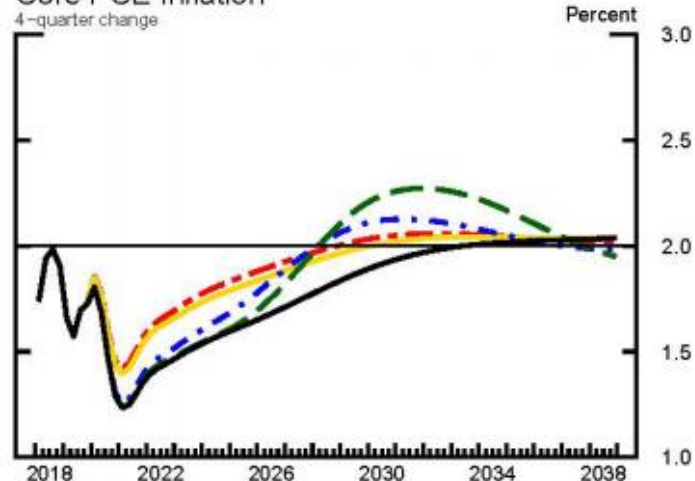
--- Mercado

--- Nula

Unemployment Rate



Core PCE Inflation



Fonte: [How Robust Are Makeup Strategies to Key Alternative Assumptions? Alternative Assumptions on Expectation Formation](#)

## ...e evidência inicial indica público não atento às mudanças

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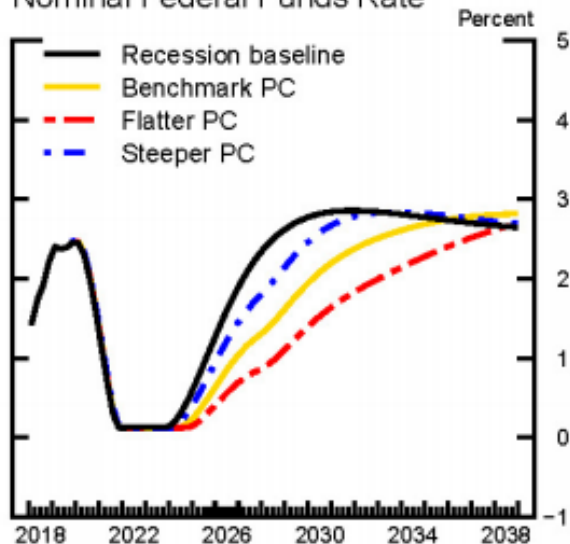
- **FED: daily survey of US households após anúncio do AIT**
  - Poucas pessoas ouviram a notícia de mudança de framework
  - Grupo que ouviu não entendeu a mudança (não possui  $E(\pi)$  diferentes)
  - Mesmo provendo explicações sobre AIT de forma aleatória entre os participantes, ainda assim suas  $E(\pi)$  não se diferenciam
- **Bank of Canada: ganho de PLT não é claro**
  - Depende de AM crível e agentes forward-looking que entendem claramente o regime

Fonte: [Average Inflation Targeting And Household Expectations](#) e [Price-Level Targeting and Inflation Expectations: Experimental Evidence](#)



### (3) PC flat também prolonga necessidade de estímulo

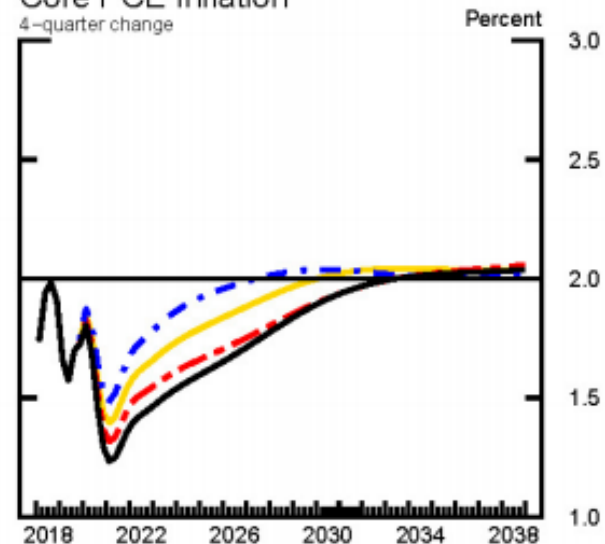
Nominal Federal Funds Rate



Unemployment Rate

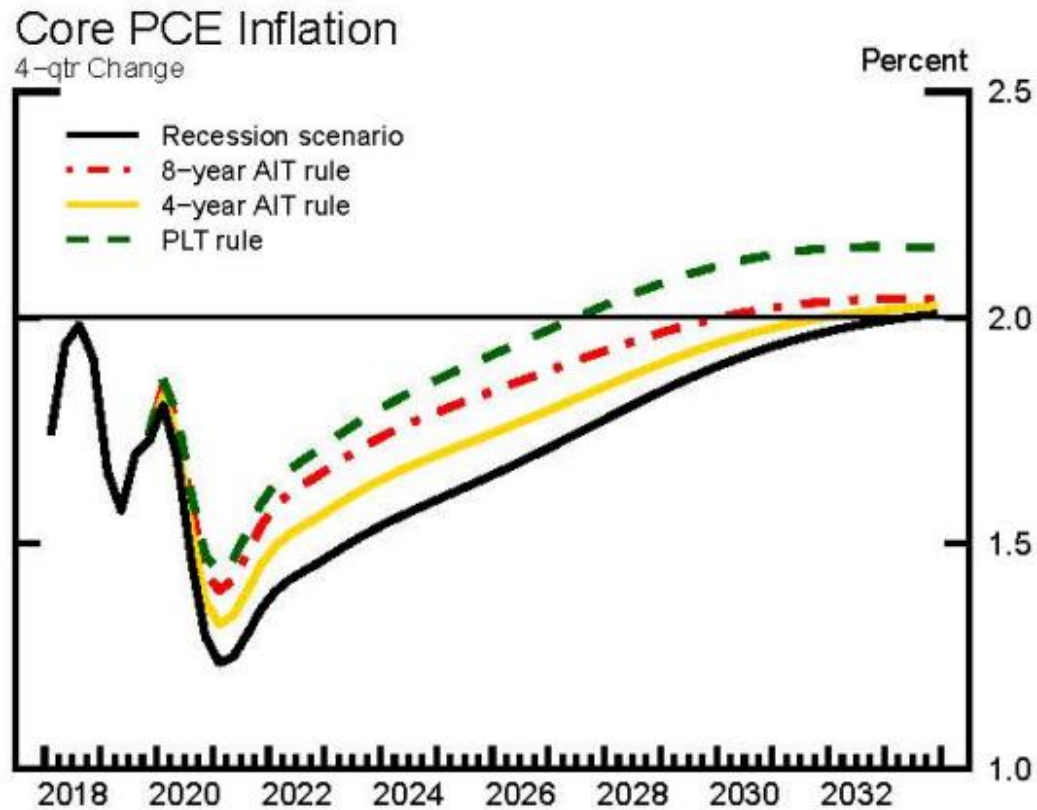


Core PCE Inflation



Fonte: [How Robust Are Makeup Strategies to Key Alternative Assumptions? Alternative Assumptions on Expectation Formation](#)

## (4) AIT pode ter pouco overshoot de inflação porque, ao contrário de PLT, ainda “esquece o passado” após alguns anos



Fonte: [Alternative Strategies: How Do They Work? How Might They Help? Simulations for “mild recession”](#)

## (5) Flexibilidade do AIT (e FG) não elimina time inconsistency

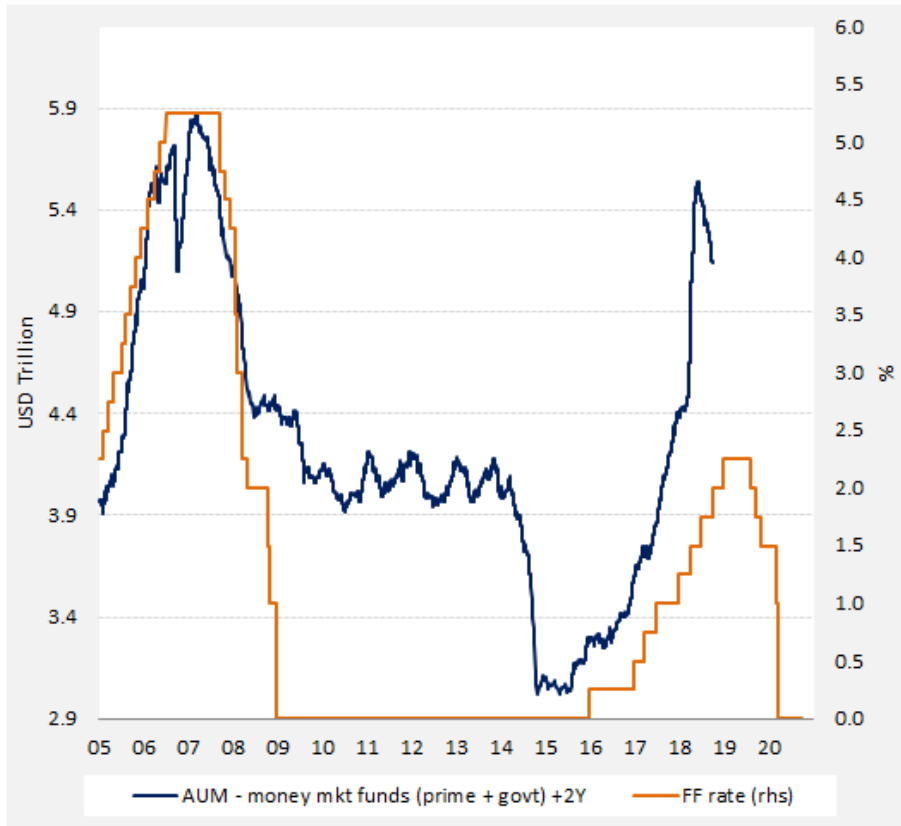


### Forward Guidance (Sept/20)

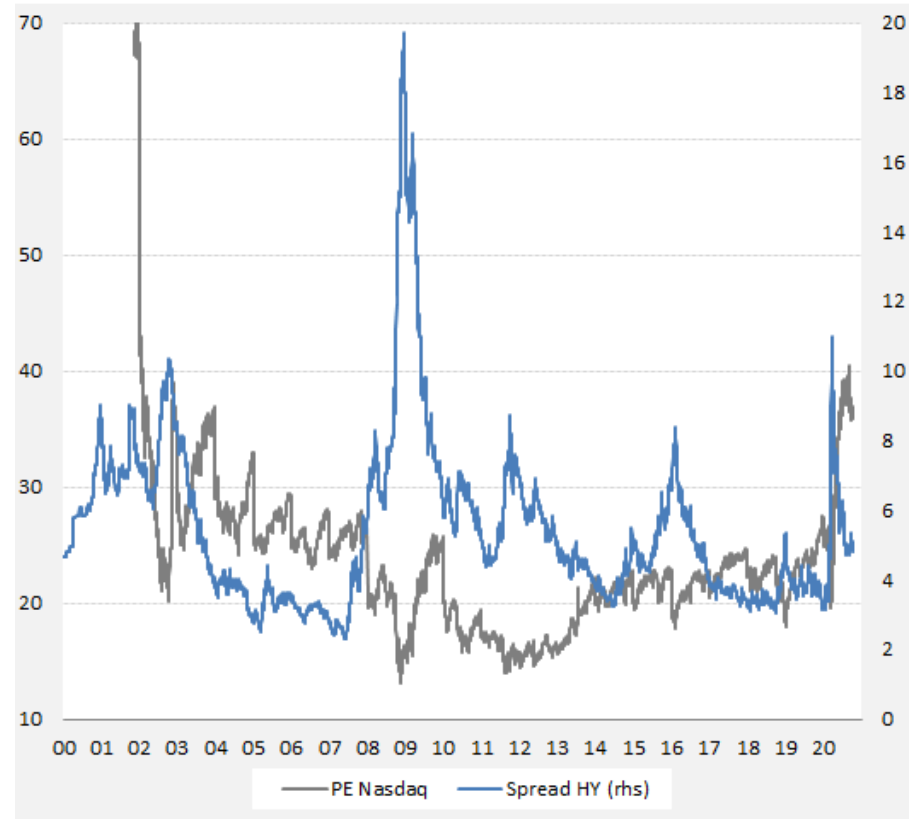
The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and **inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time**

## (6) Juros baixos levam a search for yield (eg saída MMF)

- Queda no AUM de MMF em ambiente de juros baixos

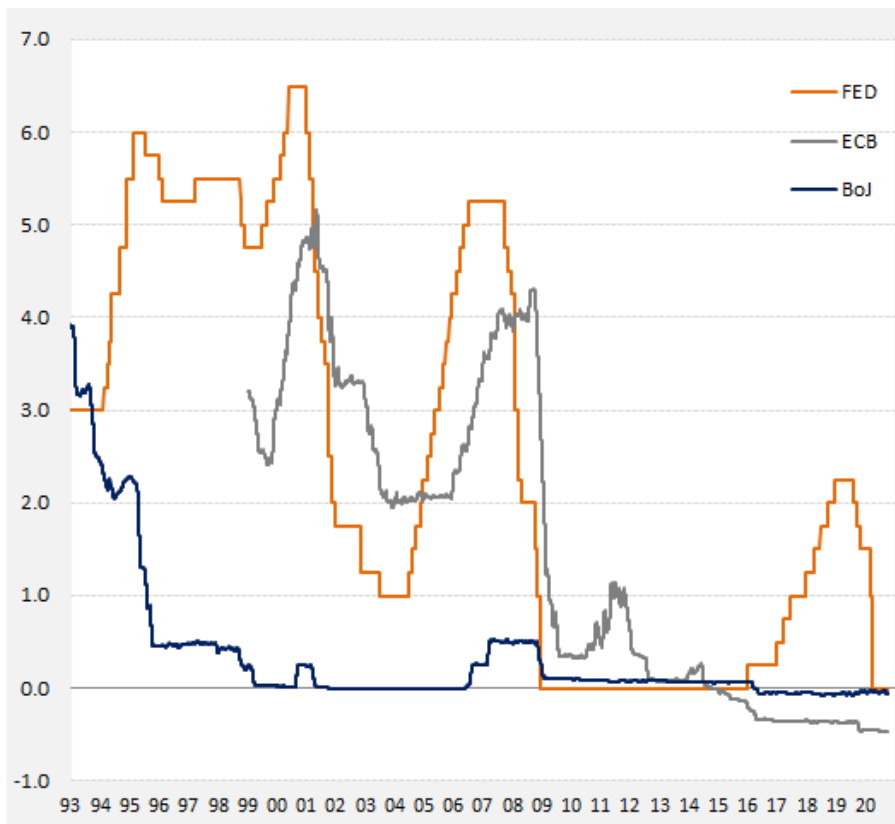


- Ativos de risco em alta

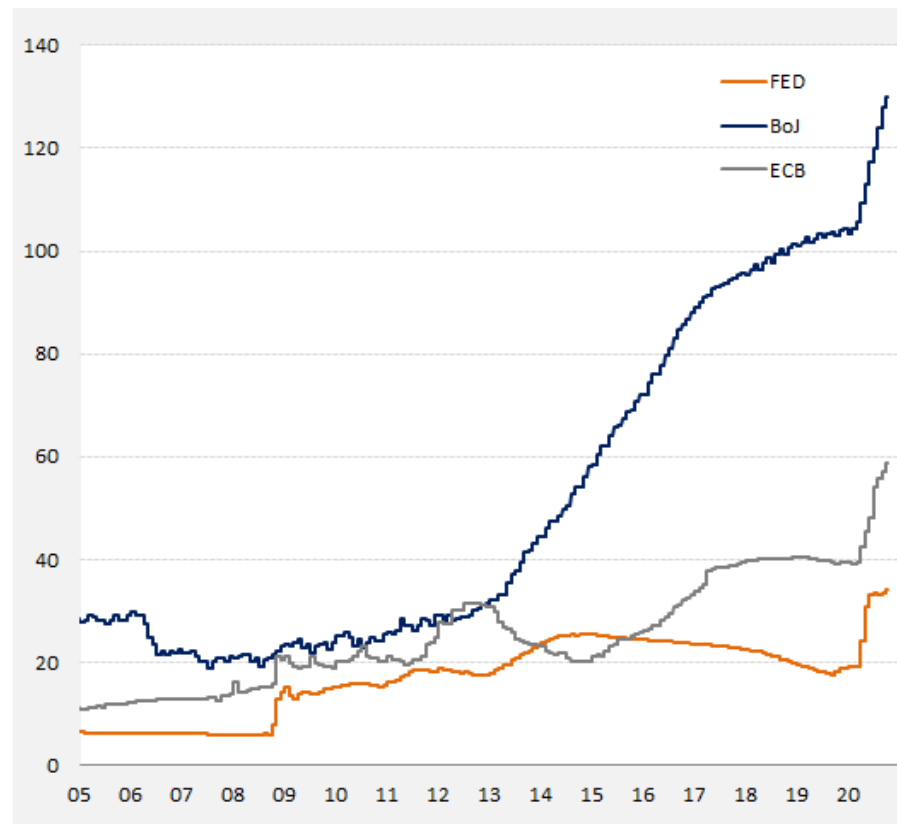


# Japão/BoJ e Euro/ECB não conseguem sair de juros e inflação baixa, Fed conseguirá?

- Rates



- Total assets (% GDP)



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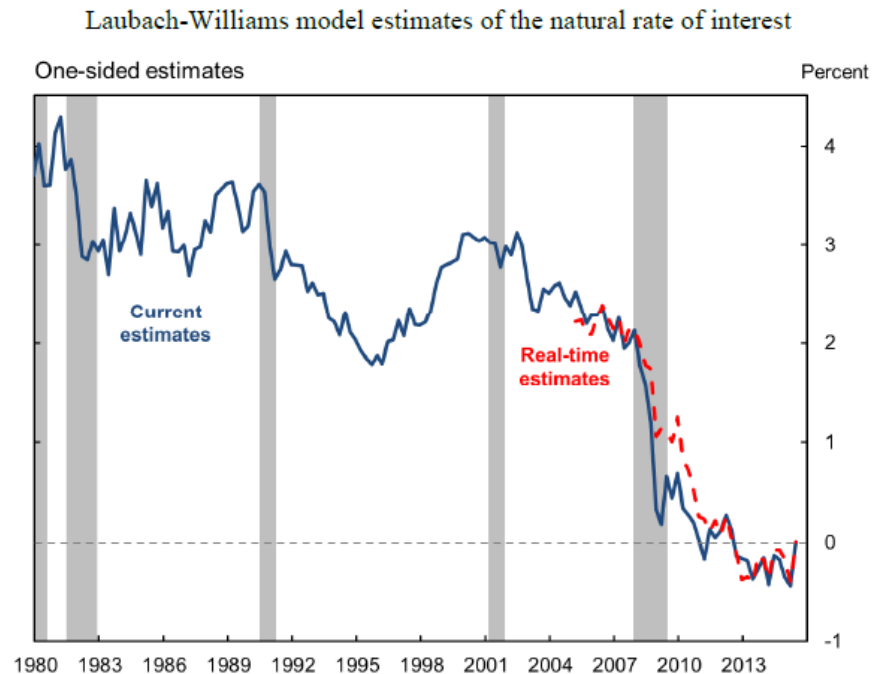
**Alta de inflação pode depender menos do FAIT e mais de fatores estruturais ( $r^*$ , PC) e da interação com fiscal**

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# ANEXO

# Queda e incerteza sobre a taxa de juros neutra ( $r^*$ )

- Queda na produtividade
- Secular stagnation (modern business requires less capital to function)
- Excesso de poupança global (proxy superávit em cc em emergentes)
- Aumento de demanda por safe assets
- Envelhecimento da população



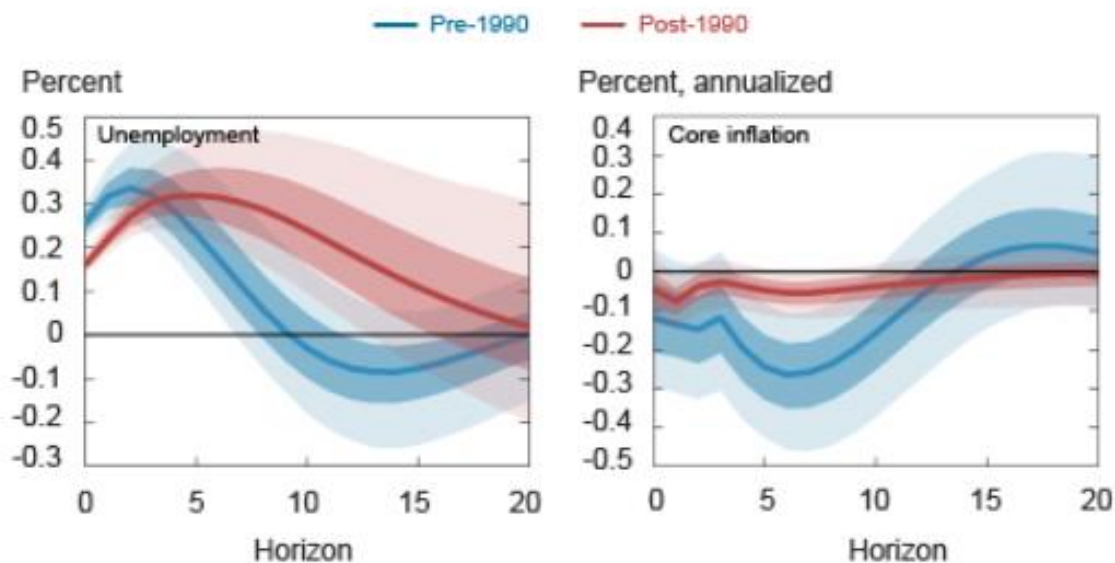
Fonte: [Measuring the Natural Rate of Interest Redux](#)



# Phillips Curve flat

- Mudanças no mercado de trabalho
- Decisão das firmas menos sensível a custos de mão-de-obra
- BCs mais eficazes em estabilizar inflação (menor trade off)

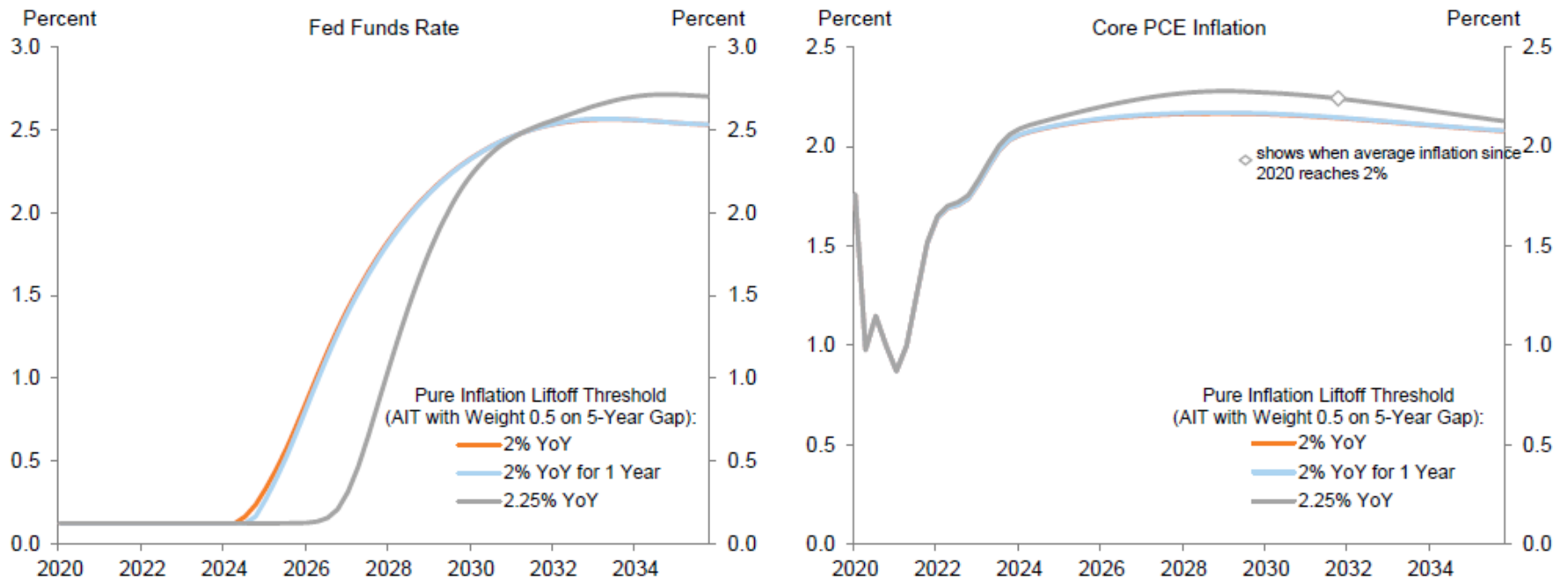
Responses of Unemployment and Core PCE Inflation to an Unemployment Shock



Fonte: [What's Up with the Phillips Curve?](#)

# Threshold de 2% para 2,25%: later liftoff but faster tightening

## A Pure Inflation Liftoff Threshold of 2.25% Would Generate a Later Liftoff but Faster Tightening



Fonte: Goldman Sachs Economics Research - The Fed's New Framework