Jens Eisenschmidt and Frank Smets: "Negative interest rates: Lessons from the Euro Area"

Comments

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Outline

1. Survey of effects of NIRP on market rates, banks, and the economy
2. This paper
3. Comments
4. Breeding the next asset price bubble?
5. How could NIRP be avoided in the future?

1. Effects of NIRP on market rates, banks, and the economy: Survey of 25 theoretical and empirical papers

Effects of negative DFR (NIRP) to markets rates, banks, and the economy: literature

The qualitative results listed in the last column of the following table summarize results about NIRP reported in 25 studies:

1. Bräuning and Wu (2017)	9. Jobst and Lin (2016)	17. Acharya and Plantin (2017)
2. Brunnermeier and Koby (2017)	10. Nucera, Lucas, Schaumburg, and Schwaab (2017)	18. Demiralp, Eisenschmidt, and Vlassopoulus (2017)
3. Buchholz, Schmidt, and Tonzer (2017)	11. Rognlie (2016)	19. Albertazzi, Nobili, and Signoretti (2017)
4. Cavallino and Sandri (2017)	12. Rostagno, Bindseil, Kamps, Lemke, Sugo, and Vlassopoulos (2016)	20. Ampudia and Van den Heuvel (2017)
5. Claessens, Coleman, and Donnelly (2017)	13. Borio, Gambacorta, and Hofmann (2015)	21. Altavilla, Boucinha, and Peydró (2017)
6. Dell'Ariccia, Haksar, and Mancini-Grifolli (2017)	14. Deutsche Bank (2013)	22. Gräb and Mehl (2015)
7. Eggertsson, Juelsrud, and Wold (2017)	15. Bech and Malkhozov (2016)	23. Kiley (2016)
		24. Kiley (2014)
8. Heider, Saidi, and Schepens (2017)	16. Dombret, Gündüz, and Rocholl (2017)	25. Khayat (2017)

Effects of negative DFR (NIRP) on market rates, banks, and the economy (1/3)

	Variables	Effects	
		Theory	Empirical evidence:
1. Market rates			
Short-term rates	Overnight interbank loans		– (1, 12)
	Excess liquidity		– (1, 3, 9, 12)
	Bank deposits	– (2, 4); **0** (7)	– (6, 9, 12); **0** (7)
	Bank loans	– (2, 4)	– (1, 6, 9, 12, 24)
	Bank margins	– (2, 4)	– (3, 5, 6, 9, 12, 13, 14, 16)
	Safe government yields		– (1)
Long-term rates	Bank loans	– (2)	– (1)
	Safe government yields	– (2)	– (1)
	Yield curve steepness		– (6, 9, 12, 13, 23)

Effects of negative DFR (NIRP) on market rates, banks, and the economy (2/3)

	Variables	Findings	
		Theory	Empirical evidence
2. Banks			
Banks	Volume of deposits	– (2)	0 (3)
	Volume of loans	– (2)	– (3, 8, 12); + (1, 6, 12, 18)
	Risk-taking		+ (3, 8, 9, 10)
	Reserves		– (1, 3, 9, 25)
	Margins		– (3, 5); 0 (6)
	Profits	– (2, 3, 4)	– (5, 6, 7, 8, 9, 12, 13); 0 (21)
	Capital	– (2)	

Effects of negative DFR (NIRP) to market rates, banks, and the economy (3/3)

	Variables	Findings	
		Theory	Empirical evidence
3. Economy			
Asset prices	Bonds		+ (1, 6)
	Equity	+ (2)	+ (1, 3, 6, 9, 17, 24)
Exchange rate	Devaluation		– (20); + (1, 6, 21, 25); 0 (12)
Output	Lending channel pass-through	– (4, 7)	- (5, 6, 7, 15); 0 (1, 19)
	Asset price channel pass-through		– (20); + (1, 8, 21, 23)
	Exchange rate channel pass-through		+ (1, 22)
	Interest rate channel pass-through		0 (1)
	Expansionary (+) or contractionary policy (-)	– (2, 4, 7);+(8)	– (8); + (18)
Inflation	Inflation level		+ (6)

2. This paper

This paper

Eisenschmidt and Smets on NIRP in the Euro Area:

- survey part of the recent literature on NIRP effects
- graphically document binding ZLB on HH deposits
- graphically document full pass-through from DFR to all other short-term market interest rates, including short-term yields on safe government securities
- estimate statistically large to full pass-through from DFR to bank loan rates
- suggest from graphical evidence that bank loans have not declined, not even in banks highly reliant on HH deposits

3. Comments

Comments (1)

- Authors claim that ZLB for HH deposits is due to some combination of low HH costs of storing cash, bank fixed costs in setting up offices, and new liquidity regulation (NSFR) that raises the value of HH deposits as bank funding source
  - This could be modelled and empirically tested by the authors
  - In a future cash-less economy (Denmark first?), the effective zero lower bound could be much lower than zero or even lower than minus storage costs, if banks pay negative interest rates on sight deposits
  - Yet this may accelerate spreading of money substitutes – including credit cards and crypto-currencies – eroding further bank deposits as a source of revenue of conventional banks

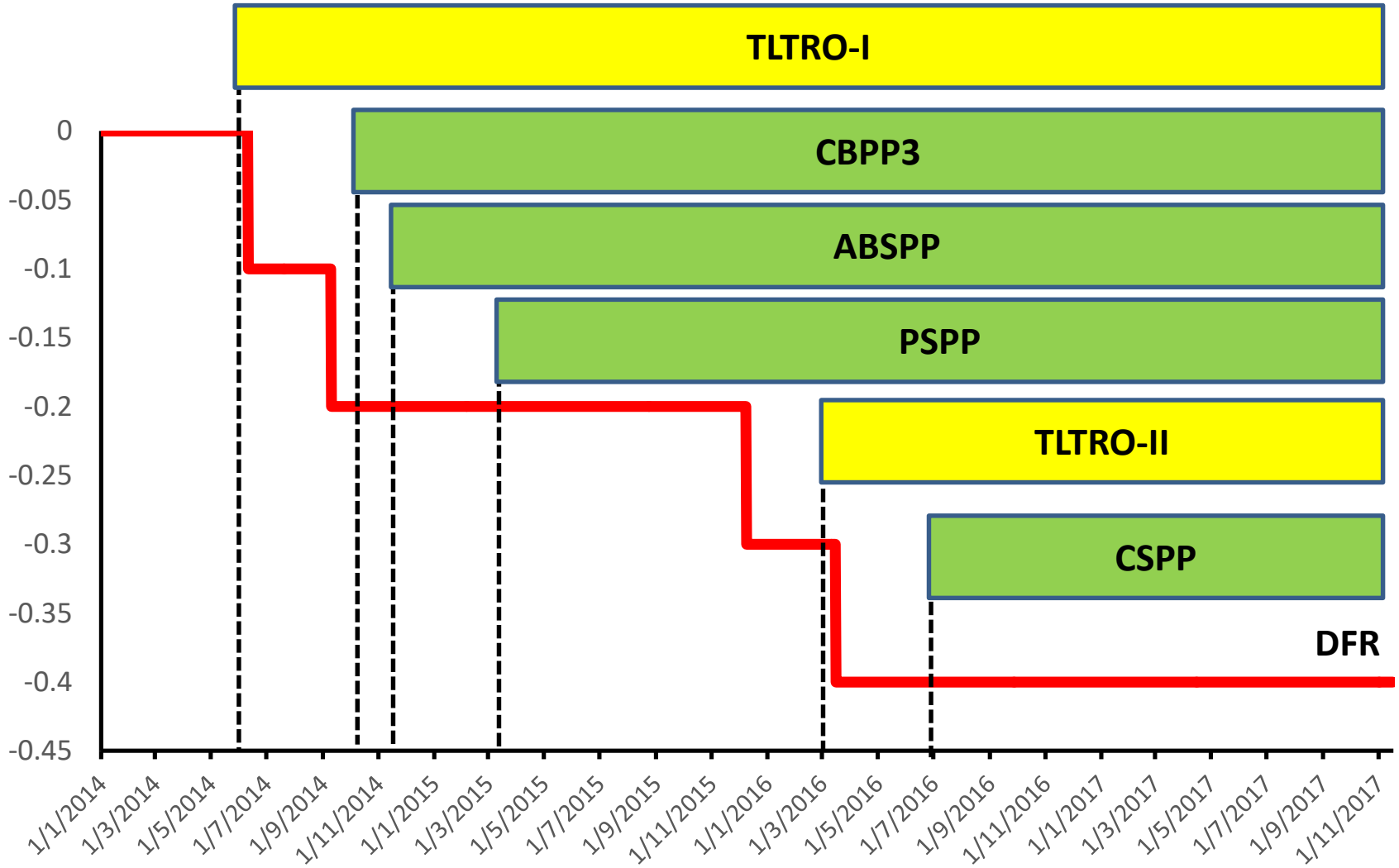
Comments (2)

- NIRP effects on bank rates and volumes are evaluated in this paper, graphically or statistically, as a bi-variate reduced-form relationship
- Alternatively, model transmission effects of NIRP to rates could be evaluated by using a formal bank model (as done partly in the previous literature) that encompasses different transmission channels of DFR reductions into negative territory:
  - Lending channel
  - Risk-taking channel
  - Search-for-yield channel
  - Asset-price channel
  - Equity-price channel

Comments (3)

- As acknowledged in the paper, it is very hard to identify the contribution of NIRP separately from the six other programs that expand the ECB's balance sheet, which are simultaneous to NIRP
- Yet it has to be done to get reliable estimates of the effects of NIRP
- One possible way to do this is by assessing the separate contributions of interest-rate cutting and balance-sheet expansions in a cross-country panel sample comprised by countries or regions that have applied either, or, or both types of programs since 2008 (EA, USA, GBR, JAP, SWE, CHE, …)

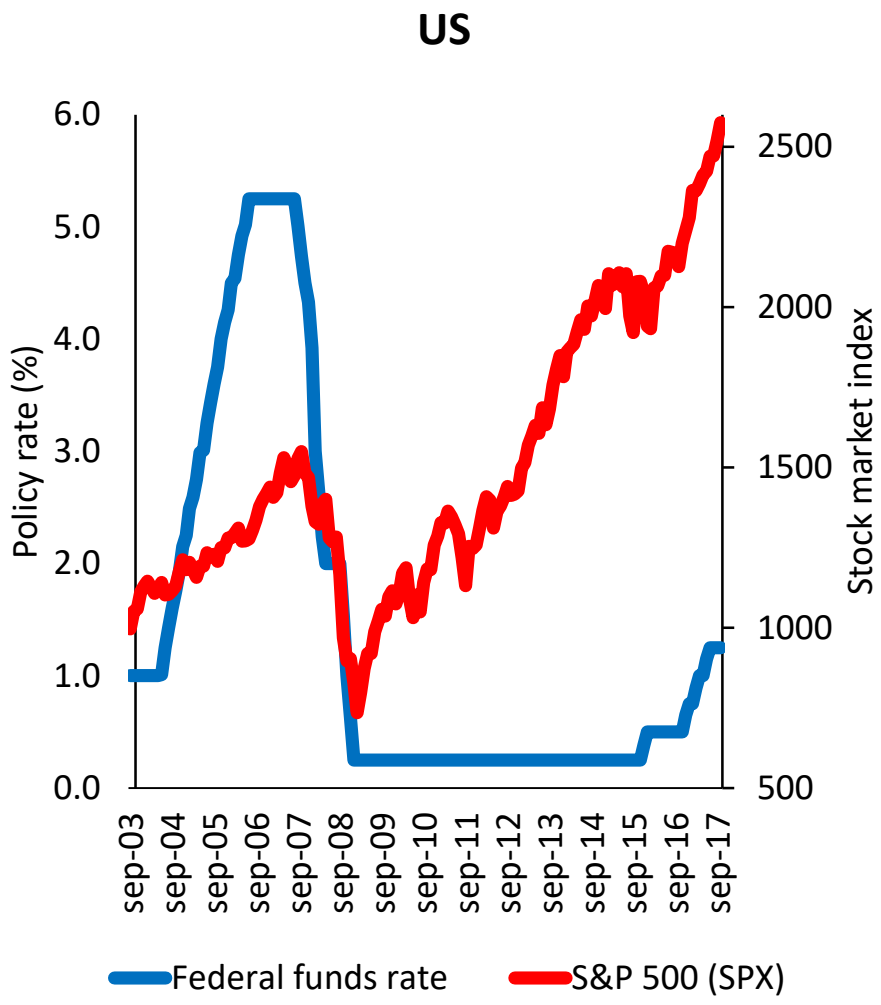
ECB's "whatever it takes": Hard to identify separate contribution of DFR

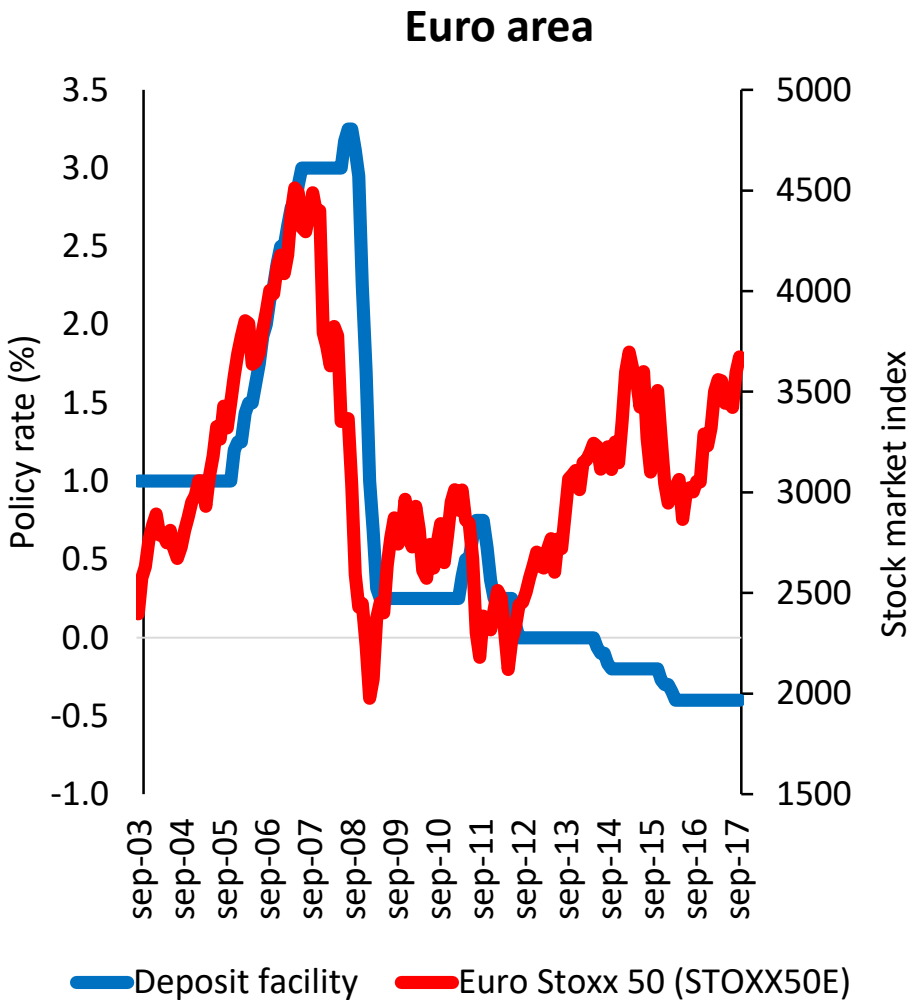


Source: ECB.

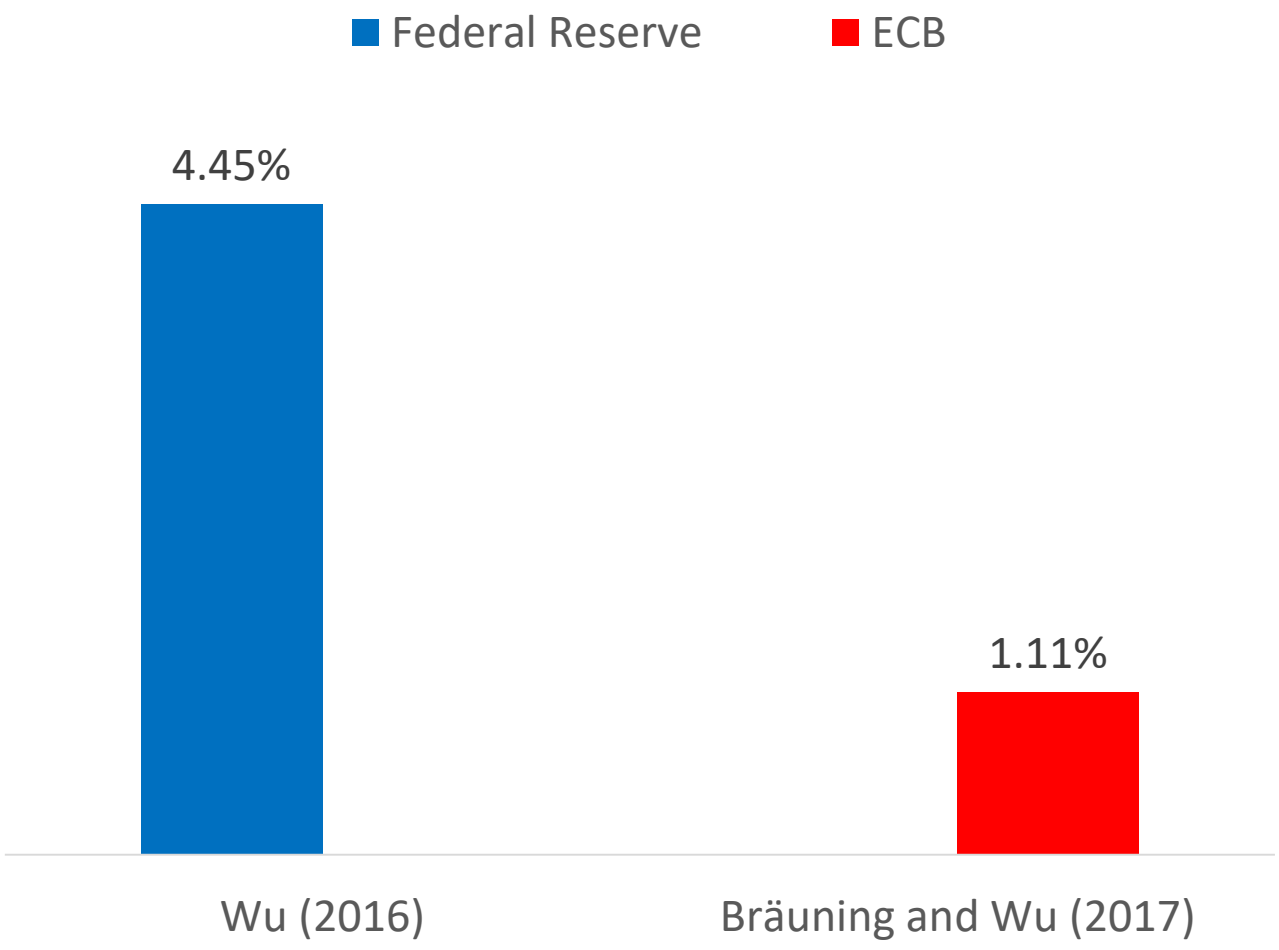
4. Breeding the next asset price bubble?
Low (negative) interest rates and equity prices

Low (negative) interest rates and equity prices: simple correlations in the US and the EA





Effect of 100-bp reduction in policy rate on stock prices: marginal effects estimated for the US and the EA



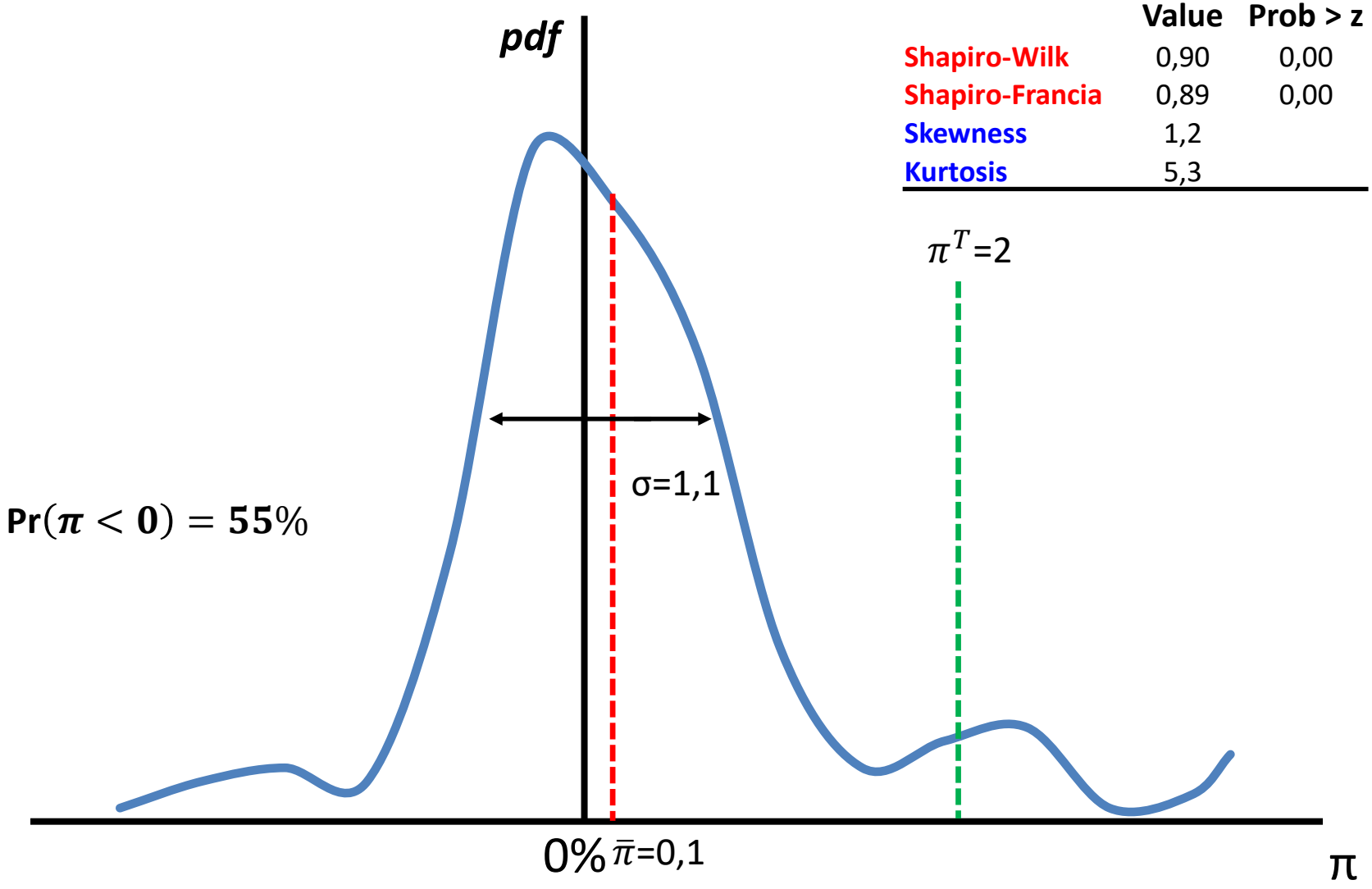
5. How can NIRP be avoided in the future? Inflation targets and inflation distribution in 5 countries

Inflation targets and inflation distribution

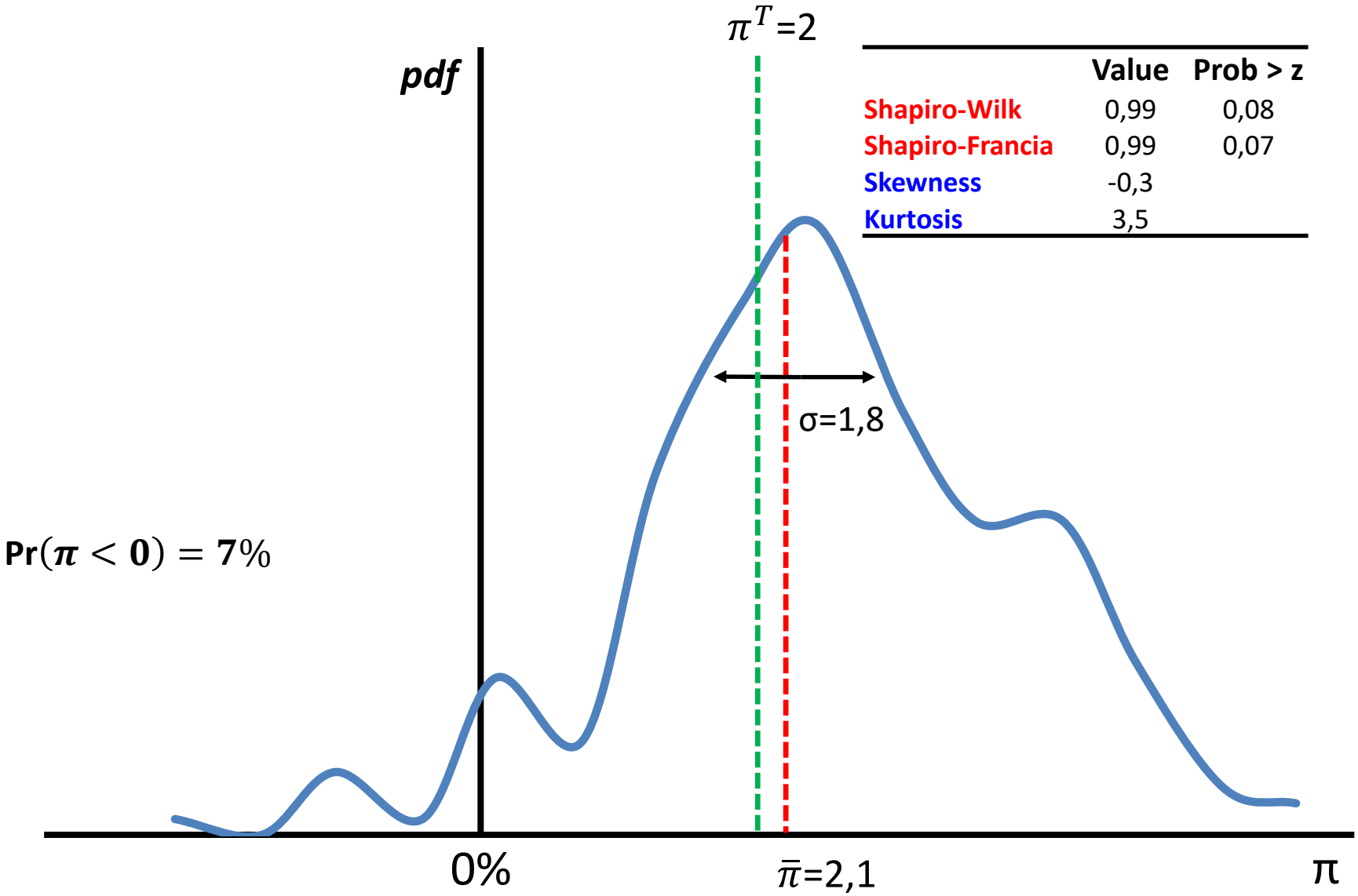
- Consider 5 very different country experiences with inflation targets and inflation distributions
- Their only common feature: non-normal π distribution
- Japan: long-term low inflation (deflation), $\pi < \pi^T = 2\%$, NIRP
- EA: low inflation, $\pi < \pi^T = 2\%$, NIRP
- US: is exiting from low inflation, avoided NIRP
- Brazil: moderately high inflation, $\pi > \pi^T = 4.5\%$, high IRP
- Chile: inflation close to target: $\pi \approx \pi^T = 3.0\%$, flexible IRP

Japan (2001.1-2017.8)

	Value	Prob > z
Shapiro-Wilk	0,90	0,00
Shapiro-Francia	0,89	0,00
Skewness	1,2	
Kurtosis	5,3	

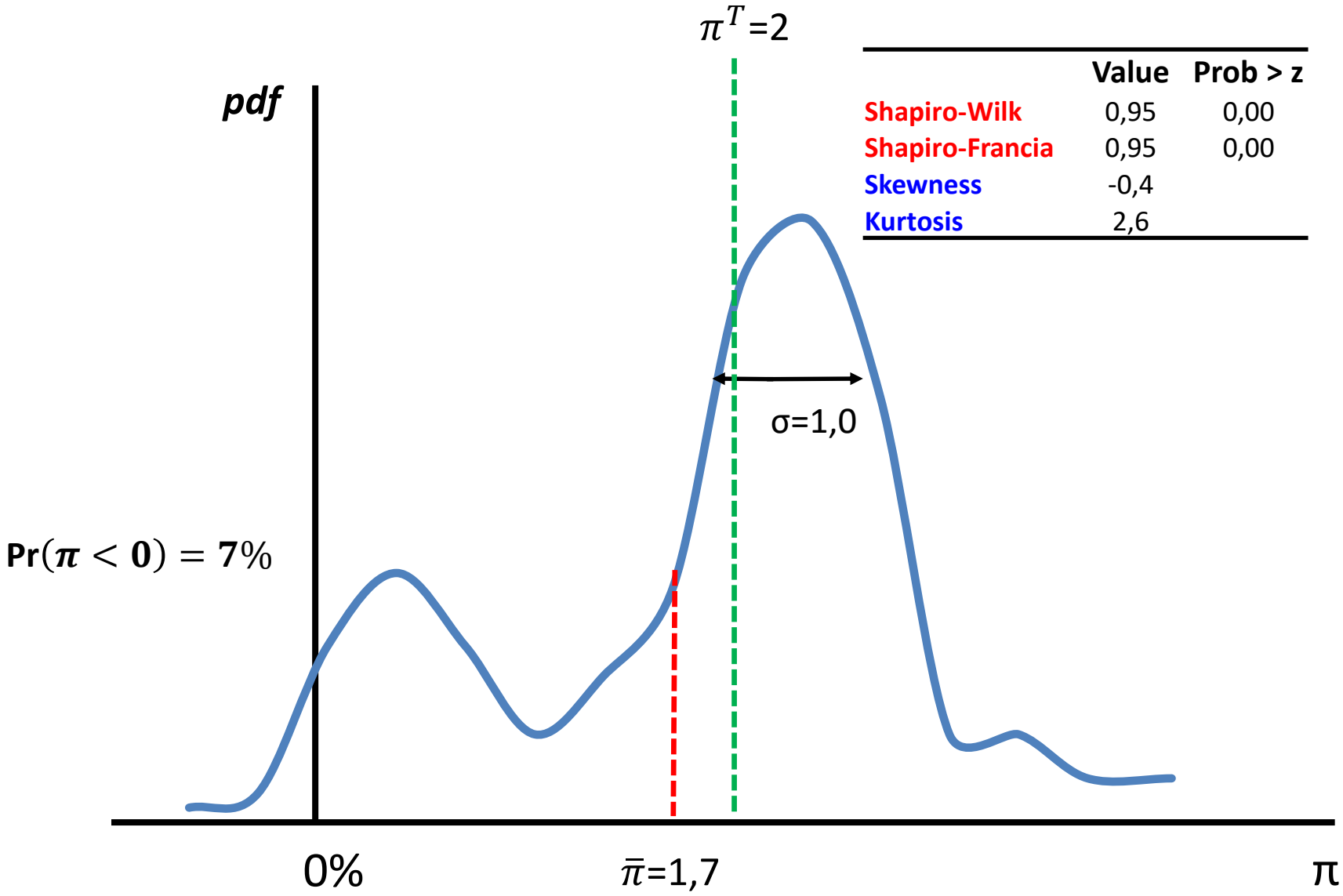


U.S. (2001.1-2017.9)



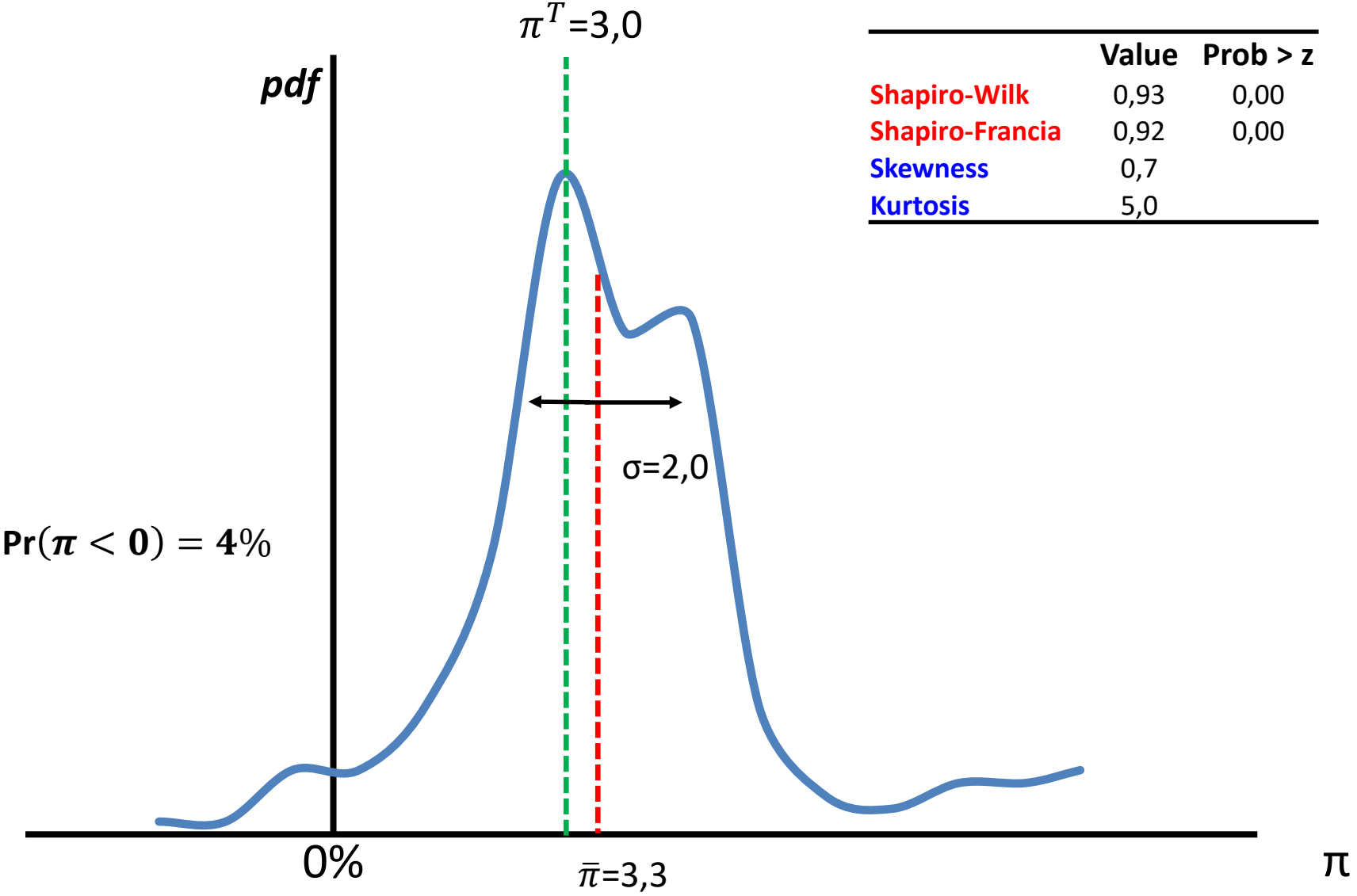
	Value	Prob > z
Shapiro-Wilk	0,99	0,08
Shapiro-Francia	0,99	0,07
Skewness	-0,3	
Kurtosis	3,5	

Euro Area (2001:1- 2017.9)



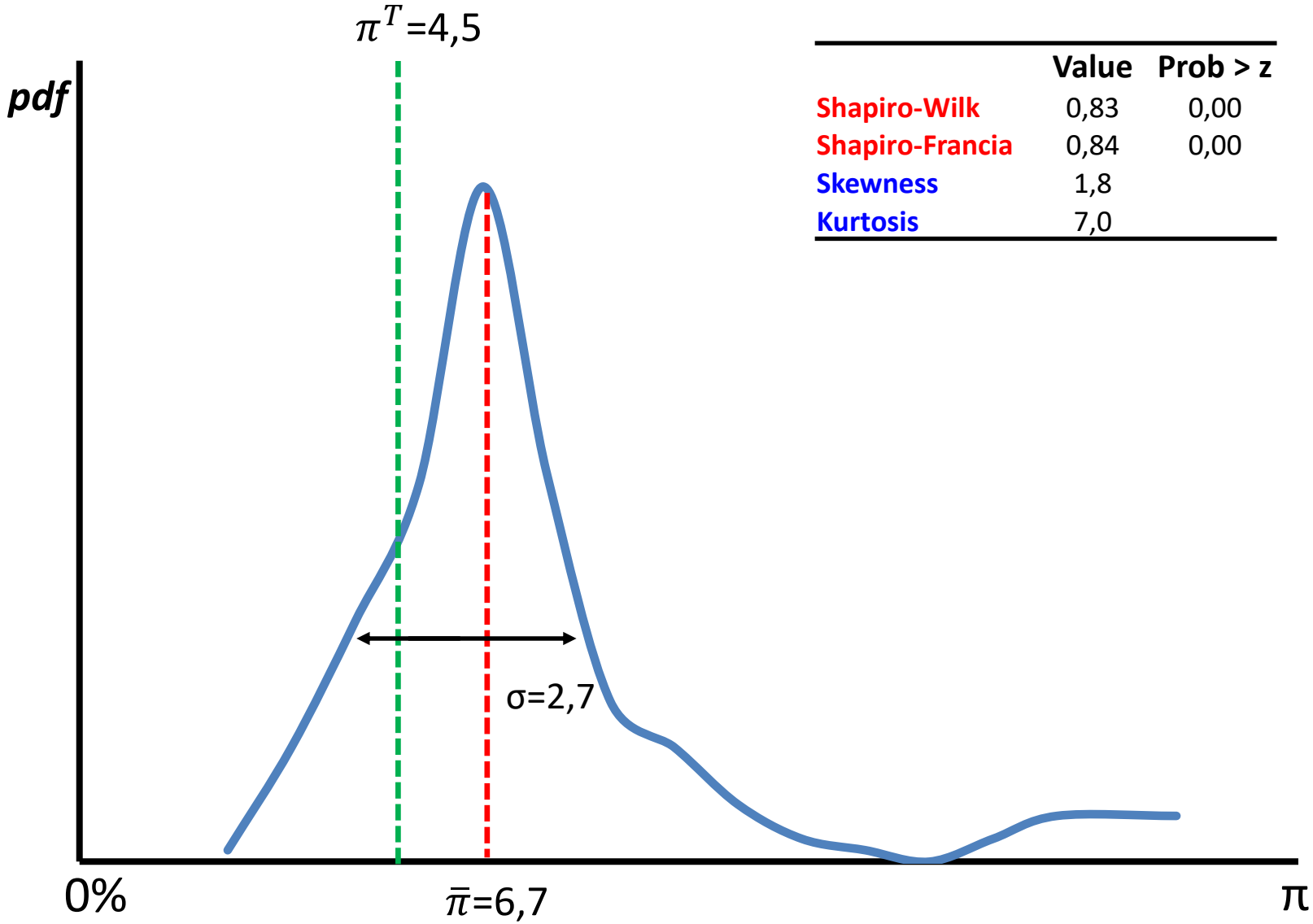
	Value	Prob > z
Shapiro-Wilk	0,95	0,00
Shapiro-Francia	0,95	0,00
Skewness	-0,4	
Kurtosis	2,6	

Chile (2001:1-2017.10)



	Value	Prob > z
Shapiro-Wilk	0,93	0,00
Shapiro-Francia	0,92	0,00
Skewness	0,7	
Kurtosis	5,0	

Brazil (2001.1-2017.8)



	Value	Prob > z
Shapiro-Wilk	0,83	0,00
Shapiro-Francia	0,84	0,00
Skewness	1,8	
Kurtosis	7,0	

Inflation targeting, price-level targeting, and NIRP

- Cross-country evidence suggests that likelihood of protracted low-inflation and deflation events – and hence the need for NIRP – declines geometrically with inflation target levels and policymaker ability to hit them
- A fringe set of studies suggests that advanced economies should raise inflation target levels (Blanchard et al. 2007, Blanco et al. 2016, De Michelis 2016)
- Another fringe set of studies suggests replacing inflation targeting by price-level targeting because of the latter's larger ability to reduce inflation deviations from price level target trends due to stabilizing expectations of future inflation, reducing the need for NIRP (Svensson 1999, Vestin 2006, Kiley 2016, Bernanke 2017)
- Could price-level targeting at price level trend rates of 3% or above reduce future NIRP events? In all likelihood, yes. This should be quantified by general-equilibrium simulations of extreme events

References

- Schmidt-Hebbel, K. and M. Carrasco (2016). “The Past and Future of Inflation Targeting: Implications for Emerging-Market and Developing Economies, in C. Ghate and K. Kletzer (eds.): *Monetary Policy in India: A Modern Macroeconomic Perspective*. Springer.
- 25 studies listed above.

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