



PENSION RESERVES  
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## ***Inflation Research***

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# Objectives

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- ☐ Review inflation-hedging assets in PRIT Fund.
- ☐ Evaluate the role of TIPS in PRIT Fund.



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# Summary of Findings & Investment Recommendation

## Summary of Findings

- During most inflationary regimes (0-5% CPI), equities and the PRIT Fund are a good inflation hedge.
- Although stagflationary environments are rare, our research shows that TIPS would perform well.
- Data show that hypothetical TIPS returns in 1970's stagflationary environment were +7%, vs. S&LP 500 (13%), Barclays Agg (2%), Long STRIPS (7%).
- Global ILBs: similar inflation protection to US TIPS, similar returns to US TIPS, and offer greater alpha potential.
- Benefits outweigh costs of owning TIPS.

## Costs of Owning TIPS

Current 10yr Breakeven: 139 bps

Return Discount to Nominal Treasuries: 35 bps per year (last 10 yrs)

## Benefits of Owning TIPS

TIPS and ILBs have negative correlation (-0.16) to equities.

Favorable sharpe ratio (TIPS 0.9, ILBs 1.2)\*

10yr TIPS breakevens are nearly 3  $\sigma$  cheap relative to 5yr historical average.

10yr real yields are also cheap: 70 bps vs. 20 bps 5yr average.

TIPS have historically outperformed risk assets in "bottom two" quadrants.

*\*Since 2000, TIPS return 6%, vol 6.7%; ILBs return 5.5%, vol 4.7%.*

## So What?

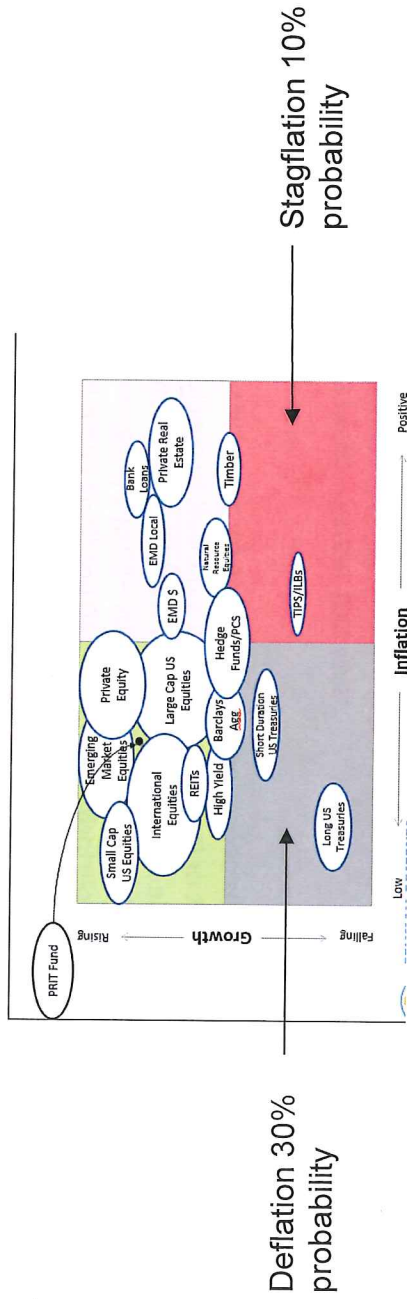
- We recommend maintaining the current TIPS/ILBs allocation (see next page for probability-weighted sizing data).
- Laddered maturity portfolio preferred over short or long duration, as it's difficult to predict how the curve will shift during stagflationary environments. Laddered maturity should provide return benefit in "bottom two" quadrants.
  - Deflationary 2008-2009: Long TIPS outperformed TIPS by +50 bps (long end rallied).
  - Deflationary 2001: Long TIPS outperformed TIPS by +140 bps (long end rallied).
  - Stagflationary 2006-2008: Long TIPS underperformed TIPS by -164 bps (short end rallied, long end unchanged).



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# Allocation & Sizing



STRIPS	TIPS	Ratio
Probability of Scenarios x Expected Return in Scenario		
$(75\% \times 13\%) + (25\% \times -7\%) = 8\%$	$(75\% \times -0.5\%) + (25\% \times 7\%) = 1.38\%$	6 : 1
Duration-weighted Allocation		
26 yrs x 5% = 1.3 yrs	7 yrs x 3% = 0.21 yrs	6 : 1