# "The Safe Assets Shortage Conundrum"

- The Bernanke "Savings Glut" hypothesis is only part of a much broader macroeconomic policy challenge.

- The International Financial System needs "safe assets".
  [Safe Assets = Secure stores of value during "bad times"]

- Only a limited supply exists [US + European govt. debt + GSEs]

- During the past 20 years there has been a persistent mismatch between the growth in demand for safe assets and the growth in supply
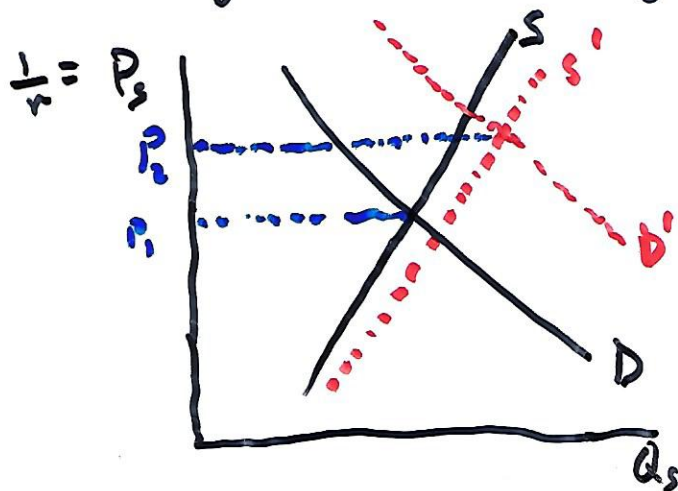
This is because US and Europe (the suppliers) have been grower slower than Asia (the demanders)

- As a result, the price of Safe Assets ~~has~~ has increased ($r\downarrow$)

- The financial crisis in 2007-09 both increased the demand for Safe Assets and reduced the supply of them.

- As a result, safe interest rates fell sharply

Table 1
A List of Safe Assets—Pre- and Post-Crisis

	Billions of US$		% of world GDP	
	2007	2011	2007	2011
US Federal government debt held by the public	5,136	10,692	9.2	15.8
Held by the Federal Reserve	736	1,700	1.3	2.5
Held by private investors	4,401	8,992	7.9	13.3
GSE obligations	2,910	2,023	5.2	3.0
Agency-and GSE-backed mortgage pools	4,464	6,283	8.0	9.3
Private-issue ABS	3,901	1,277	7.0	1.9
German and French government debt	2,492	3,270	4.5	4.8
Italian and Spanish government data	2,380	3,143	4.3	4.7
Safe assets	20,548	12,262	36.9	18.1

Source: Barclays Capital (2012). Data came from Federal Reserve Flow of Funds, Haver Analytics, and Barclays Capital.
Note: Numbers are struck through if they are believed to have lost their "safe haven" status after 2007. GSE means "government-sponsored enterprise." ABS means "asset-backed security."

Safe Asset Shortages and Their Macroeconomic Consequences

There have been a number of attempts in the literature to estimate the size of the pool of safe assets. All of these use somewhat crude rules to categorize assets. Table 1 presents one such measure, which includes debt from the US, German, French, Italian, and Spanish governments, together with assets held by the US "government-sponsored enterprises" such as Freddie Mac and Fannie Mac, which were heavily invested in mortgage-backed assets and were widely perceived to have the full backing of the US government. The table illustrates the collapse in the quantity of global safe assets from 2007 to 2011. Explicit US government debt rose, but mortgage-backed debt issued by the US government-sponsored enterprises was no longer perceived as safe, and neither was debt from the Italian and Spanish governments. The global quantity of safe assets plummeted as a result. Eichengreen (2016) offers an alternative and more detailed breakdown of safe assets, in which one category includes all OECD sovereign debt rated AA or above. This measure also shows a dramatic fall in safe assets during the financial crisis.

The most direct implications of a fall in the supply of safe assets can be seen in Figure 1. The two black lines in Figure 1 illustrate the paths of the short-term interest rate (dark area) and of the expected return on equity (area under the top line). The difference between the two lines is the equity risk premium (light area). Short-term rates feature a widely noted downward secular trend and a sharp drop during the Great Recession. The evolution of the expected return on equity is markedly different. It features the same downward trend as the short-term interest rate until the early 2000s, then remains more or less stable. The disconnect between a stable expected return on equity and a declining short-term interest rate is particularly salient after 2002, and even more so since the beginning of the Great Recession,

Figure 1

US Interest Rate and Expected Equity Risk Premium (ERP)
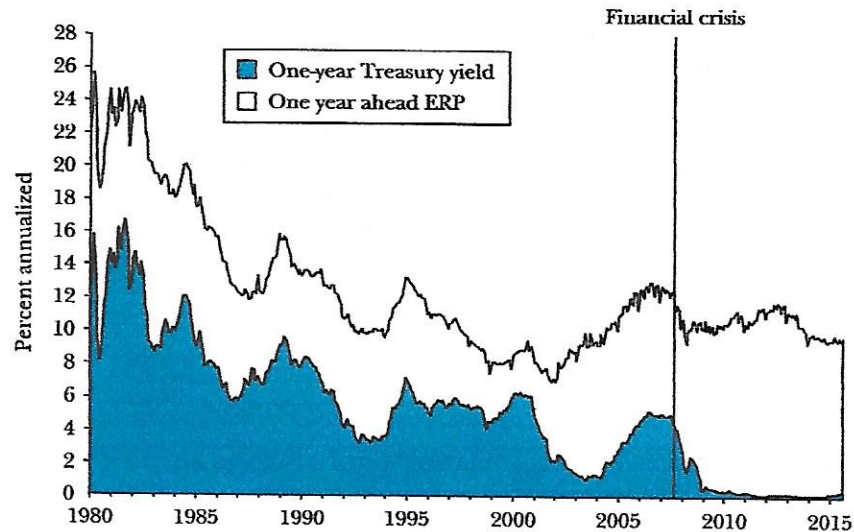
Source: One-year Treasury yield: Federal Reserve H.15; ERP: Duarte and Rosa (2015).
Note: The graph shows the one-year US Treasury yield (dark area) and the one-year expected risk premium (ERP) (grey area), calculated as the first principal component of 20 models of the one-year-ahead equity risk premium. The figure shows that the equity risk premium has increased, especially since the Global Financial Crisis.

as the latter combined a greater demand for safety and a diminution in the quantity of what were perceived as safe assets.[2] It suggests a shift towards safe assets and away from riskier ones. Figure 2 documents that over the same time period, estimates of the return to physical capital remained remarkably stable. This implies that a similar disconnect is observed between returns to capital and safe interest rates, which can also be in large part attributed to an increase in risk premia attached to physical investment (Caballero, Farhi, and Gourinchas 2017).[3]

While the underlying trend towards safe assets may have been gradual throughout the 1990s and 2000s, it was partially masked by the rapid increase in the supply of pseudo-safe assets, privately engineered by the US financial sector, as well as the increase in debt issuance by fiscally weak sovereigns such as Italy or Greece.

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[2] Less consistent with the persistence of the "safety" premium is the fact that within fixed income, some credit-spreads have compressed significantly. Our conjecture is that this within-asset-class phenomenon is the result of search for yield among those intermediaries constrained by mandates and regulations rather than by their own demand for safety. It is also the kind of situation that can lead to sharp spikes in risk spreads during risk-off scenarios.

[3] Similarly, Del Negro, Giannone, Giannone, and Tambalotti (2017) find supportive evidence that the decline in safe real interest rates in the United States was driven mostly by an increase in the premium for safety and liquidity of short-term Treasury bills relative to less-liquid and less-safe assets.

- For awhile, the economy can sustain full employment output by have the CB lower interest rates. However, once the Zero Lower Bound hits, the economy must adjust by having output fall. [A "Safety Trap"].

A Simple Safety Trap Model

- The standard IS·LM model only distinguishes between 2 kinds of assets: (1) Money, and (2) Interest Bearing Assets (Bonds). By "Walras' Law", we can describe macroeconomic equilibrium by studying the interactions of the Goods Mkt. (IS) and the Money Mkt. (LM).

r   LM

IS

Y
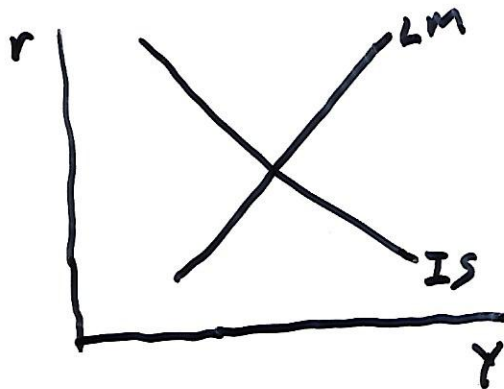
- In practice, the Fed sets r to maintain full employment, using a "Taylor Rule"

r

TR

TR'

IS

IS'

Y   Y
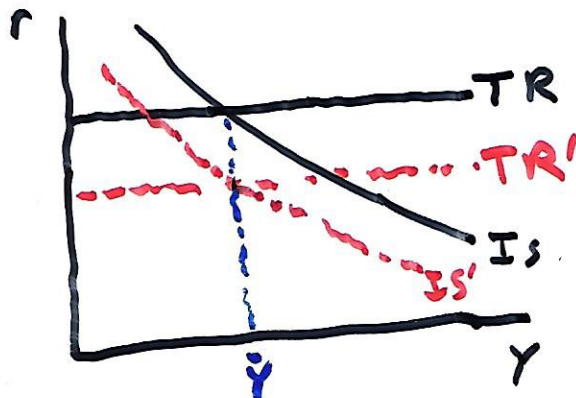
- These days, "money" is no longer very important. However, "safe assets" are. They are used as collateral.

- So now consider three assets : 1.) Money
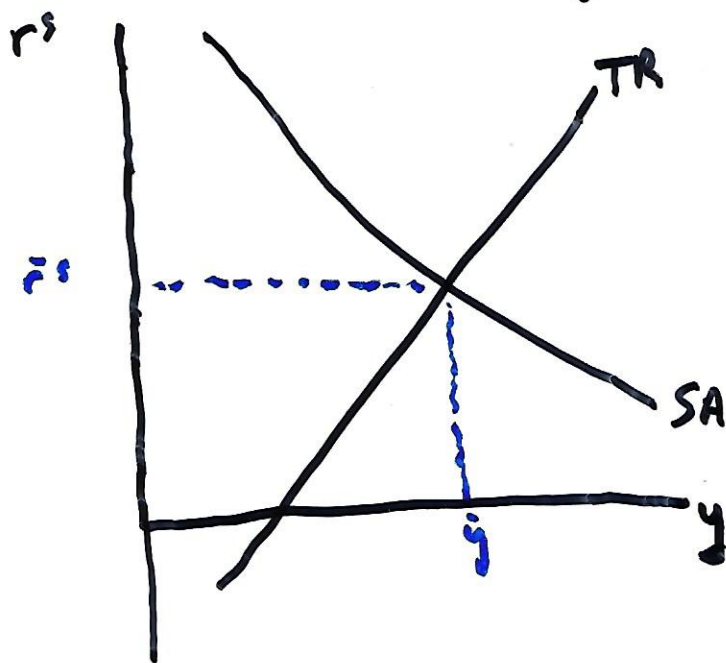
2.) Safe Assets (r^s)

3.) Risky Assets (r)

- This gives us three equations:

IS: $y = \bar{y} - \delta(r - \bar{r}) - \delta_s(r^s - \bar{r}^s)$

TR: $r^s = \max[0, \hat{r}^s + \phi(y - \bar{y})]$
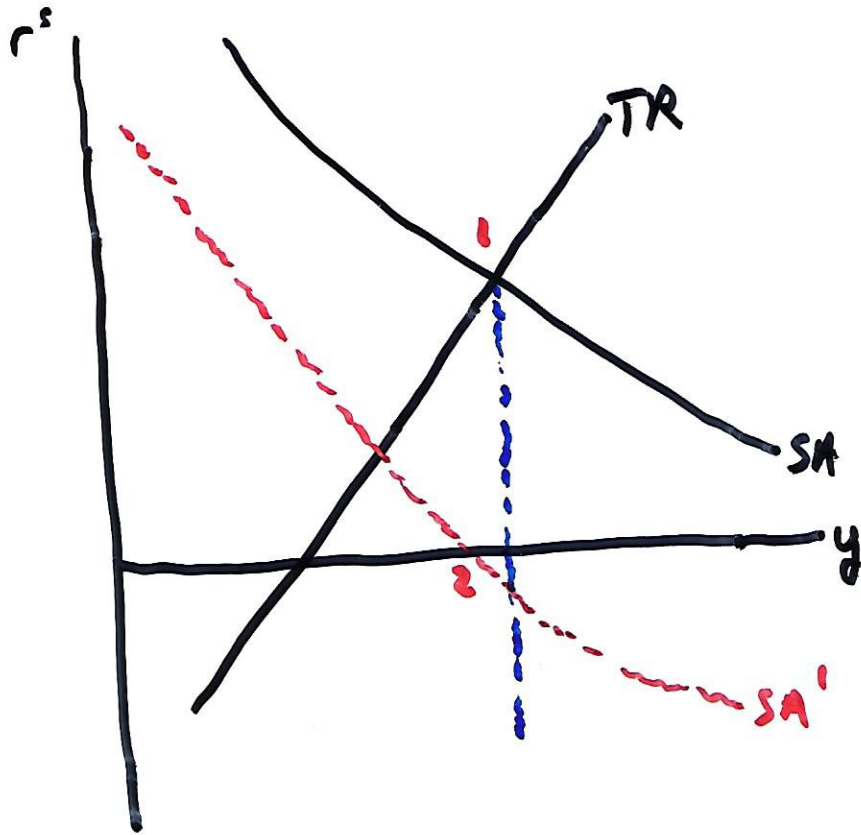
SA: $s = \epsilon_y \cdot y + \epsilon_s \cdot r^s$

- TR/SA combine to determine (y, r^s). Then IS determines r.

$\bar{r}^s$: "Natural" Safe interest Rate [when $y = \bar{y}$, $\bar{r}^s = \epsilon_s^{-1}(s - \epsilon_y \cdot \bar{y})$

- Can achieve $y = \bar{y}$ by setting $\hat{r}^s = \bar{r}^s$, as long as $\bar{r}^s \geq 0$

• If S falls enough, the $\bar{F}^s \geq 0$ constraint will bind

• At pt. 2, output falls below $\bar{y}$. [Also, risky returns, r, begin to rise].

Responses to the Safety Trap

1.) Ex. Rate Appreciation of Safe Asset Country Currencies
   - Creates Political Tensions

2.) Increase Supply of Govt. Debt
   - Eventually it will become unsafe
   - Externalities / Political Constraints

3.) Increase Supply of Private Safe Assets
   - Been There, Done That !

4.) Reduce the Demand for Safe Assets
   - Risk-Pooling / Swap Lines
   - Reduce Regulatory Demands for Safe Assets
   - Encourage Financial Mkt. Development in Emerging Markets,