

Assonebb: Rischi sovrani e nuova regolamentazione finanziaria: le sfide
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Lo Shadow Banking System

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1. Il ruolo degli institutional cash pools nella crisi
2. L'offerta di strumenti alternativi da parte dello shadow banking system
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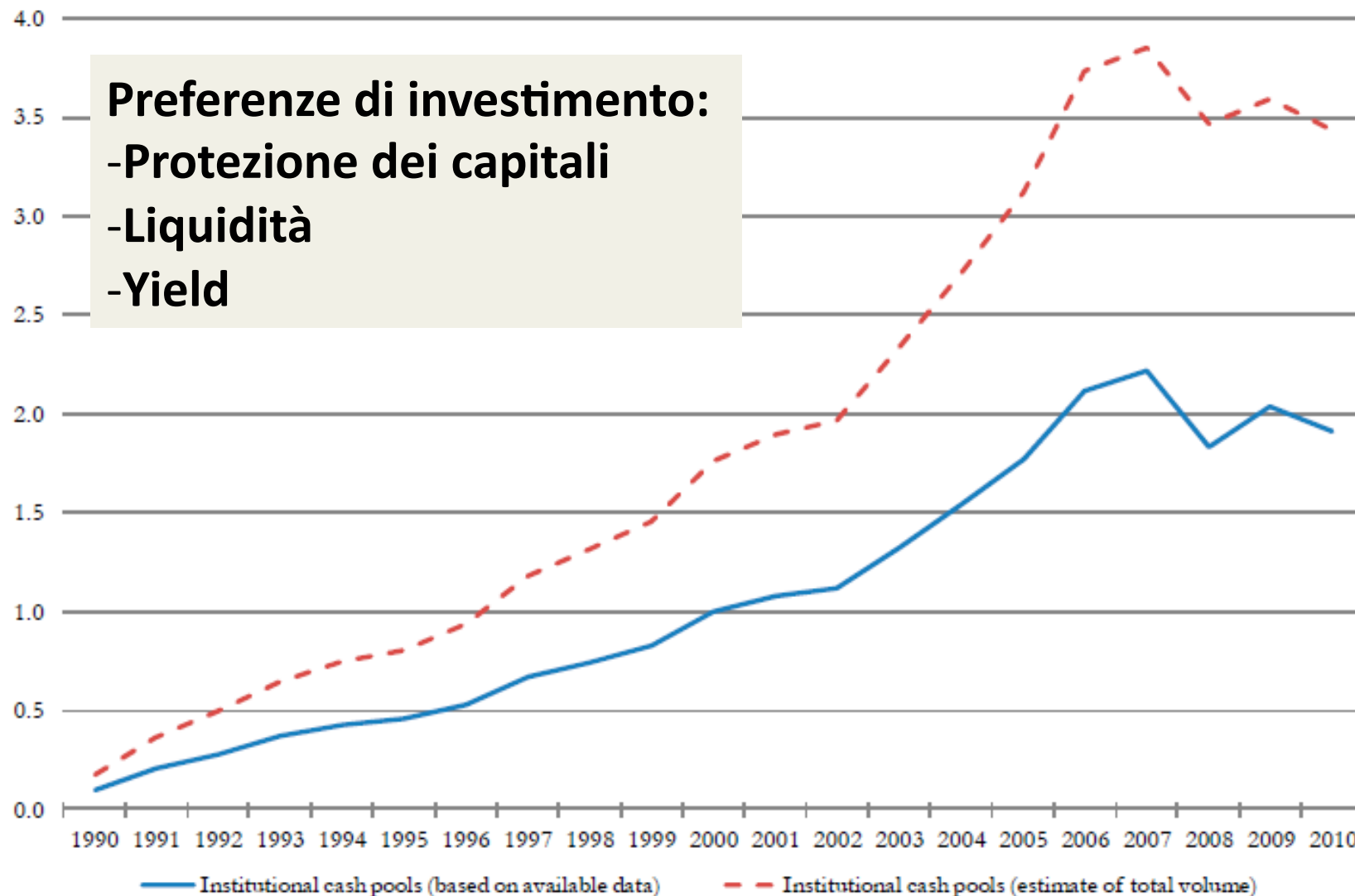
1. LA DOMANDA: Il ruolo degli institutional cash pools nella crisi

- Large, centrally managed, short term cash balances of global non-financial corporations and institutional investors.
- Investono sul mercato wholesale
- Preferenze di investimento
 - garanzia del capitale
 - liquidità
 - yield

Dimensioni del mercato degli institutional cash pool e crescita nel tempo:

Figure 1: The Secular Rise of Institutional Cash Pools

\$ trillions



Source: CapitalIQ, RMA, ICI, BIS, *The Economist*, Pozsar (2011)

LA DOMANDA

Sul mercato si registra una insufficienza di strumenti adeguatamente liquidi e garantiti (Treasury Bills) e di banche assicurate da FDIC con la conseguente scarsità di strumenti finanziari adeguati. Infatti, i depositi bancari sono *cash equivalent*, ma non garantiti oltre i \$100.000, per cui non vi sono sufficienti banche che, anche su base complessiva, possano garantire i *cash pools*. (vedi Tav. 2 e Tav. 3)

Insufficienza di strumenti adeguatamente liquidi e garantiti:

Figure 5: Not Enough Short-Term Government-Guaranteed Instruments to Source Safety for Institutional Cash Pools

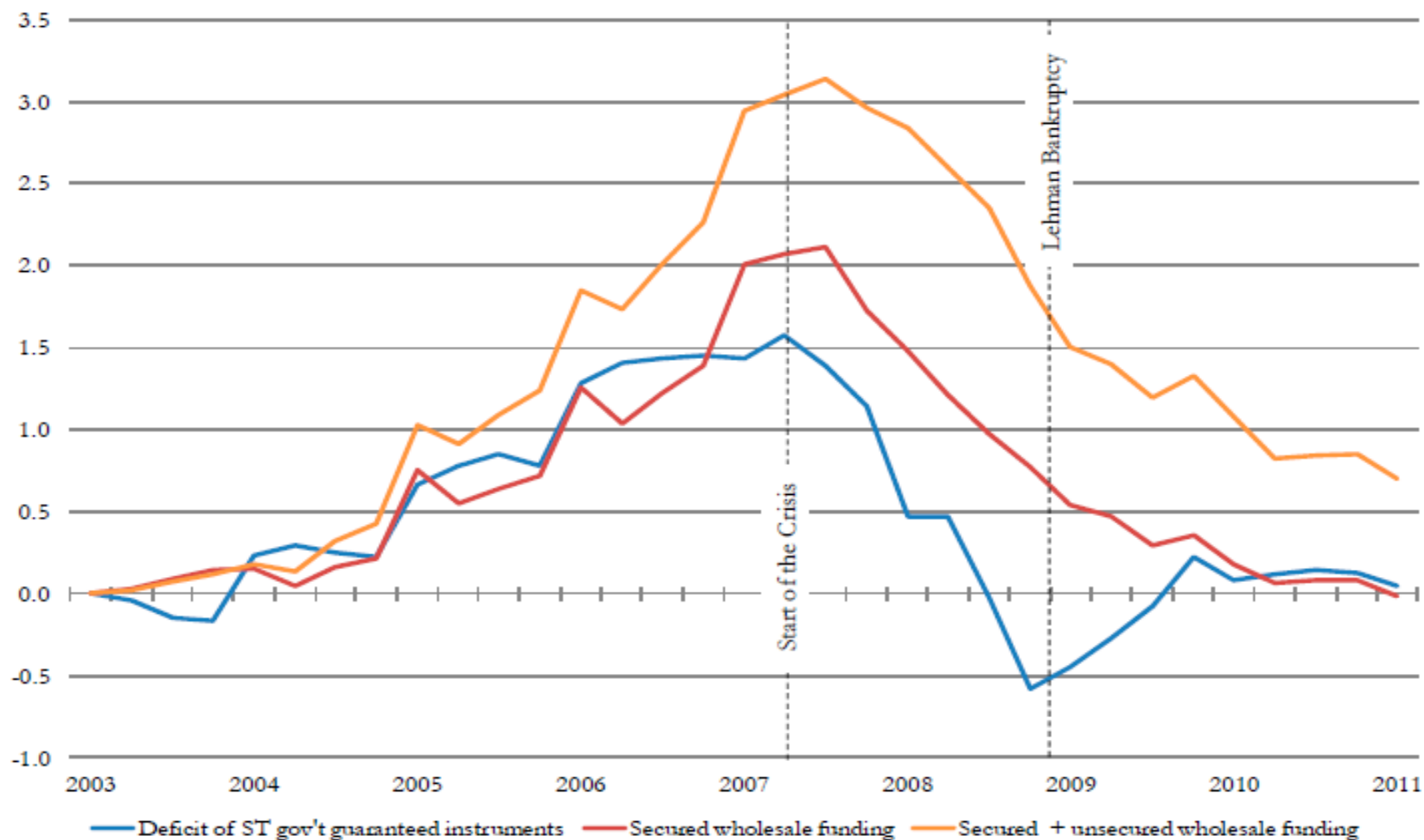
Sources of Institutional Demand for Treasury Bills and Agency Discos						
<i>\$ billions</i>						
	2005	2006	2007	2008	2009	2010
Outstanding Amounts:						
Short-term Treasury securities*	1,146	1,173	1,192	1,909	2,558	2,487
Short-term agency securities**	568	489	560	903	844	618
Total	1,714	1,662	1,752	2,812	3,402	3,105
(-) Foreign Official Holdings:						
Short-term Treasury securities	216	193	181	273	562	na
Short-term agency securities	112	110	80	130	34	na
Total	328	303	261	403	596	na
(-) Demand from Institutional Cash Pools:						
Institutional cash pools (based on available data)	1,771	2,120	2,216	1,834	2,041	1,911
Institutional cash pools (estimate of total volume)	3,120	3,735	3,852	3,467	3,596	3,432
Average	2,445	2,927	3,034	2,650	2,818	2,672
= Deficit of safe, liquid, short-term products	(1,059)	(1,568)	(1,543)	(241)	(12)	na

*Includes Treasury bills and Treasury securities with a remaining maturity of one year or less; **includes agency discount notes.

Sources: TIC, SIFMA, CapitalIQ, RMA, ICI, BIS, Pozsar (2011)

Gli Institutional cash pool si rivolgono allo Shadow Banking per soddisfare la domanda di prodotti liquidi e garantiti.

Figure 9: Filling the Vacuum of Short-Term Government Guaranteed Debt
Cumulative flows, 2003Q1=0.0, \$ trillion



Source: Pozsar (2011)

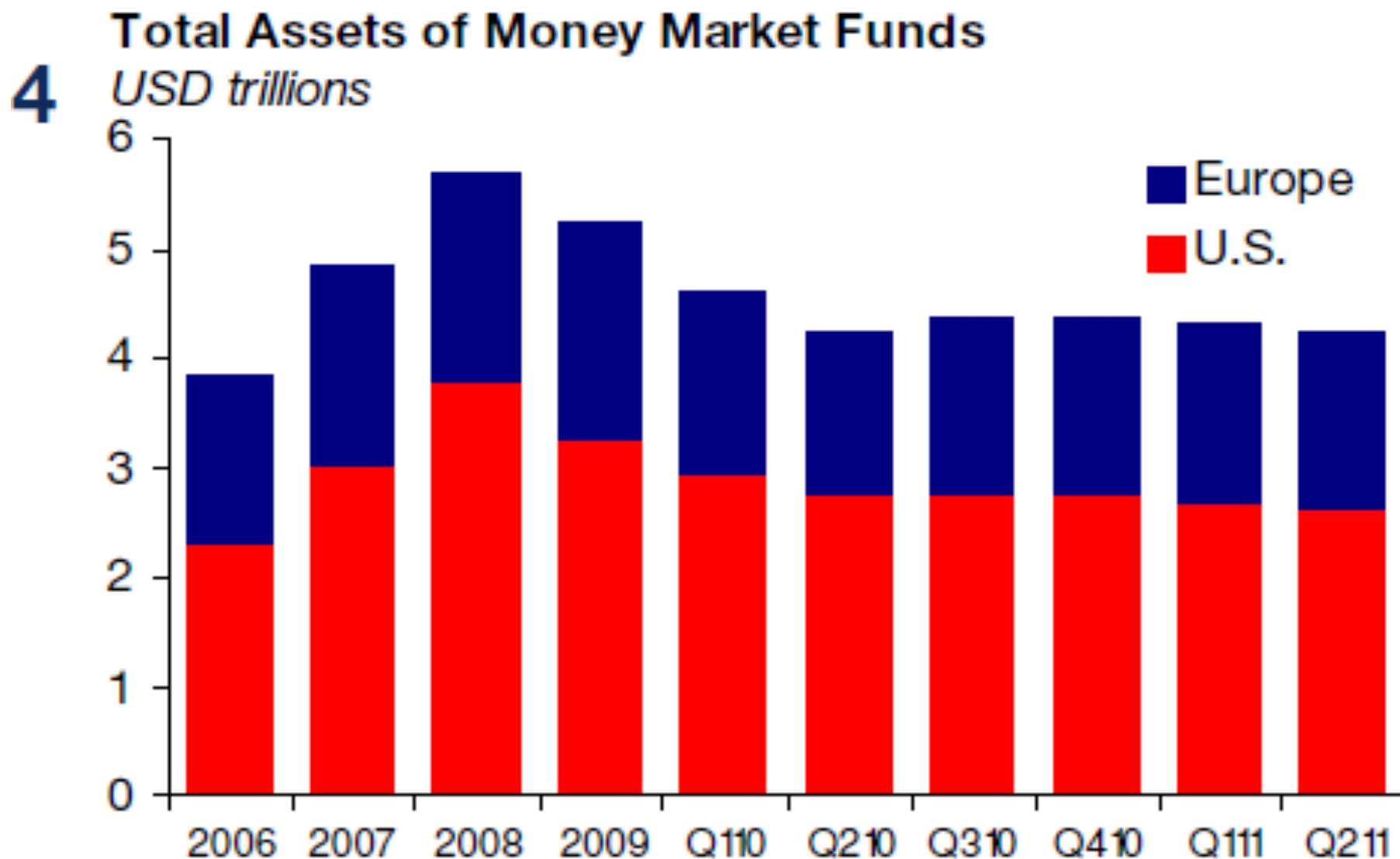
L'OFFERTA di strumenti alternativi da parte dello shadow banking system

Il sistema finanziario non bancario (non FDIC insured e non FED financed through the window) ha saputo creare strumenti sicuri, liquidi, a breve termine.

Due tipi di strumenti:

- **INDIRETTI: MMMFUNDS (Money Market Mutual Funds) (Tav. 4)**
- **STRUCTURED SECURITIES as produced by the shadow banking system (Tav. 5)**

I Money Market Mutual Funds: le dimensioni del mercato



Source: U.S. Flow of Funds, Federal Reserve, Fitch Ratings, EFAMA, AMF, iMoneyNet, IFIA

Structured Securities



Source: SIFMA, AFME

Intermediation chain sullo Shadow Banking System:

- Le fasi del processo (Tav. 6)
- I soggetti e le relative garanzie (Tav. 7)
- Le funzioni e le aggiunte di liquidity e credit put (Tav. 8 e Tav. 9)

Le FASI del processo

Replicano le fasi che hanno luogo all'interno di una banca universale o in una Financial Holding company che controlli originators, commercial banking, investment banking (Diversified Broker Dealer).

Il processo dello Shadow Banking è riuscito a produrre Structured Securities che, con aggiunta di CREDIT e LIQUIDITY PUTS erano percepiti equivalenti ai T. Bills a breve per garanzia e liquidità e migliori come rendimento.

Le FASI del processo

Exhibit 3: The Shadow Credit Intermediation Process

The shadow credit intermediation process consists of distinct steps. These steps form a credit intermediation chain that depending on the type and quality of credit involved may involve as little as 3 steps and as much as 7 or more steps. The shadow banking system conducts these steps in a strict sequential order. Each step is conducted by specific types of financial entities, which are funded by specific types of liabilities (see Table 2).



Source: Shadow Banking (Pozsar, Adrian, Ashcraft, Boesky (2010))

Lo shadow banking si contraddistingue per la separazione dell'attività finanziaria in una serie di step distinti, gestiti da attori essi stessi differenti e con un altissimo grado di specializzazione.

FASI – SOGGETTI - FUNDING

Exhibit 2: The Steps, Entities and Funding Techniques Involved in Shadow Credit Intermediation - **Illustrative Examples**

	Function	Shadow Banks	Shadow Banks' Funding*
Step (1)	Loan Origination	Finance companies	CP, MTNs, bonds
Step (2)	Loan Warehousing	Single and multi-seller conduits	ABCP
Step (3)	ABS Issuance	SPVs, structured by broker-dealers	ABS
Step (4)	ABS Warehousing	Hybrid, TRS/repo conduits, broker-dealers' trading books	ABCP , repo
Step (5)	ABS CDO Issuance	SPVs, structured by broker-dealers	ABS CDOs, CDO-squareds
Step (6)	ABS Intermediation	LPFCs, SIVs, securities arbitrage conduits, credit hedge funds	ABCP , MTN, repo
Step (7)	Wholesale Funding	2(a)-7 MMMFs, enhanced cash funds, securities lenders, etc.	\$1 NAV shares (shadow bank "deposits")

*Funding types highlighted in **red** denote securitized funding techniques. Securitized funding techniques are *not* synonymous with secured funding.

Source: Shadow Banking (Pozsar, Adrian, Ashcraft, Boesky (2010))

Shadow Banking: I soggetti e le relative garanzie

TAV. 8

Exhibit 1: The Topology of Pre-Crisis Shadow Banking Activities and Shadow Bank Liabilities

Institution	Direct Public Enhancement		Indirect Public Enhancement		Unenhanced
	Explicit	Implicit	Explicit	Implicit	
Depository Institutions <i>(Commercial Banks, Clearing Banks, LLCs)</i>	Insured deposits ¹ Non-deposit liabilities ²		Credit lines to shadow banks ⁹	Trust activities Tri-party clearing ¹⁰ Asset management Affiliate borrowing	
Federal Loan Programs <i>(DoE, SBA and FHA credit parts)</i>	Loan guarantees ³				
Government Sponsored Enterprises <i>(Fannie Mae, Freddie Mac, FHLMC)</i>		Agency debt	Agency MBS		
Insurance Companies	Annuity liabilities ⁴ Insurance policies ⁵				Securities lending CDS protection sold
Pension Funds	Unfunded liabilities ⁶				Securities lending
Diversified Broker-Dealers <i>(Investment Bank Holding Companies)</i>	Bekeered deposits (ILCO) ⁷		CP ¹¹	Tri-party repo ¹²	MTNs Prime brokerage customer balances Liquidity puts (ABS, TOB, VRDO, ARS)
Mortgage Insurers					Financial guarantees
Monoline Insurers					Financial guarantees CDS protection sold on CDOs Asset management (GICs, SIVs, conduits)
Shadow Banks					
Finance Companies (Standalones, Captives)	Bekeered deposits (ILCO) ⁷		CP ¹¹		Term ABS, MTNs
Single-Seller Conduits			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
Multi-Seller Conduits			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
Hybrid Conduits			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
TRS/Repo Conduits			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
Securities Arbitrage Conduits			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
Structured Investment Vehicles (SIVs)			ABCP ¹³	Extendible ABCP ¹⁷	Extendible ABCP ¹⁸
Limited Purpose Finance Companies			ABCP ¹³	MTNs, capital notes	Extendible ABCP ¹⁸
Credit Hedge Funds (Standalones)			Bi-lateral repo ¹⁴		Extendible ABCP ¹⁸
			Bi-lateral repo ¹⁴		Extendible ABCP ¹⁸
					MTNs, capital notes
					Bi-lateral repo ¹⁵
					Bi-lateral repo ¹⁵
Money Market Intermediaries <i>(Shadow Bank "Depositors")</i>					
Money Market Mutual Funds					\$1 NAV
Overnight Sweep Agreements					\$1 NAV
Cash "Plus" Funds					\$1 NAV
Enhanced Cash Funds					\$1 NAV
Ultra-Short Bond Funds					\$1 NAV
Local Government Investment Pools (LGIPs)					\$1 NAV
Securities Lenders					\$1 NAV
European Banks <i>(Landsbanks, etc.)</i>	State guarantees ⁸	ABCP ¹⁶	Credit lines to shadow banks ¹⁷		

Source: Shadow Banking (Pozzar, Adrian, Ashcraft, Boesky (2010))

\$1NAV: Monay Market Fund che garantiscono un valore di mercato alla pari e non Mark to Market.

Liquidity and credit PUTS nei vari tipi di securitization

Exhibit 4: The Functional Role and Liquidity/Credit Put Features of Various Forms of Securitization

		Funding Type		Funding Type	
		Maturity Mismatched	Maturity Matched	Maturity Mismatched	Maturity Matched
		Funzione tecnica		Funzione economica	
Collateral Type	Whole Loans/Bonds	Step 1	Step 2	Step 1	Step 2
		Securitization Type: ABCP, TOB, VRDO Function: Warehousing/Term Funding of Whole Loans/Bonds Issuers: Single and Multi-Seller Conduits, as well as TOBs and VRDOs	Securitization Type: ABS, CLO, CDO (1st order) Function: Term Funding of Whole Loans Issuers: SPVs	Securitization Type: ABCP, TOB, VRDO Liquidity Put: Yes Credit Put: Yes (credit lines, wraps, asset sales)	Securitization Type: ABS, CLO, CDO (1st order) Liquidity Put: Static Pools - No Master Trusts - Yes Credit Put: Static Pools - No Master Trusts - Yes
	Securitized Loans/Bonds	Step 3	Step 4	Step 3	Step 4
		Securitization Type: ABCP Function: Warehousing/Term Funding of ABS, CLOs and CDOs Issuers: LPFCs, SIVs, Securities Arbitrage Conduits	Securitization Type: ABS CDOs (2nd order) Function: Term Funding of ABS, CLOs and CDOs Issuers: SPVs	Securitization Type: ABCP Liquidity Put: Yes Credit Put: Yes (credit lines, wraps, asset sales)	Securitization Type: ABS CDOs (2nd order) Liquidity Put: No Credit Put: Yes (wraps, asset sales)
		Collateral Type		Securitized Loans/Bonds	

Source: Shadow Banking (Pozzar, Adrian, Ashcraft, Boesky (2010))

Vedi annex slide seguente

ISSUERS:

1. **Conduit** (società finanziaria che può specializzarsi in un solo titolo, single, o in una pluralità di titoli, multiseller).
2. **SPV** (Special purpose vehicle)
3. **LPFC** (Limited purpose financial vehicle)
4. **SIV** (special investment vehicle)

CREDIT PUT:

- Credit lines
- Wrap
- Asset sale
- Static pools
- Master trust

LIQUIDITY PUT:


- Static pools: NO
- Master trust: YES.

SECURITIES:

- **ABCP** (Asset back commercial paper)
- **TOB** (Tender option bond)
- **VRDO** (variable rate denominated obligation)
- **ABS** (Asset backed securities)
- **CLO** (collateralized loan obligation)
- **CDO** (Collateralized Debt obligations by ABS)


Tipologie di Shadow Banks (S.B.)

–Government sponsored entities (GSE:
Fanny Mae etc.)

–“Internal” S.B. - F.H.C  Funzioni e/o soggetti
interni alle financial
holding companies

- EU Banks  Banche
universali
europee

– External S.B. -Diversified broker

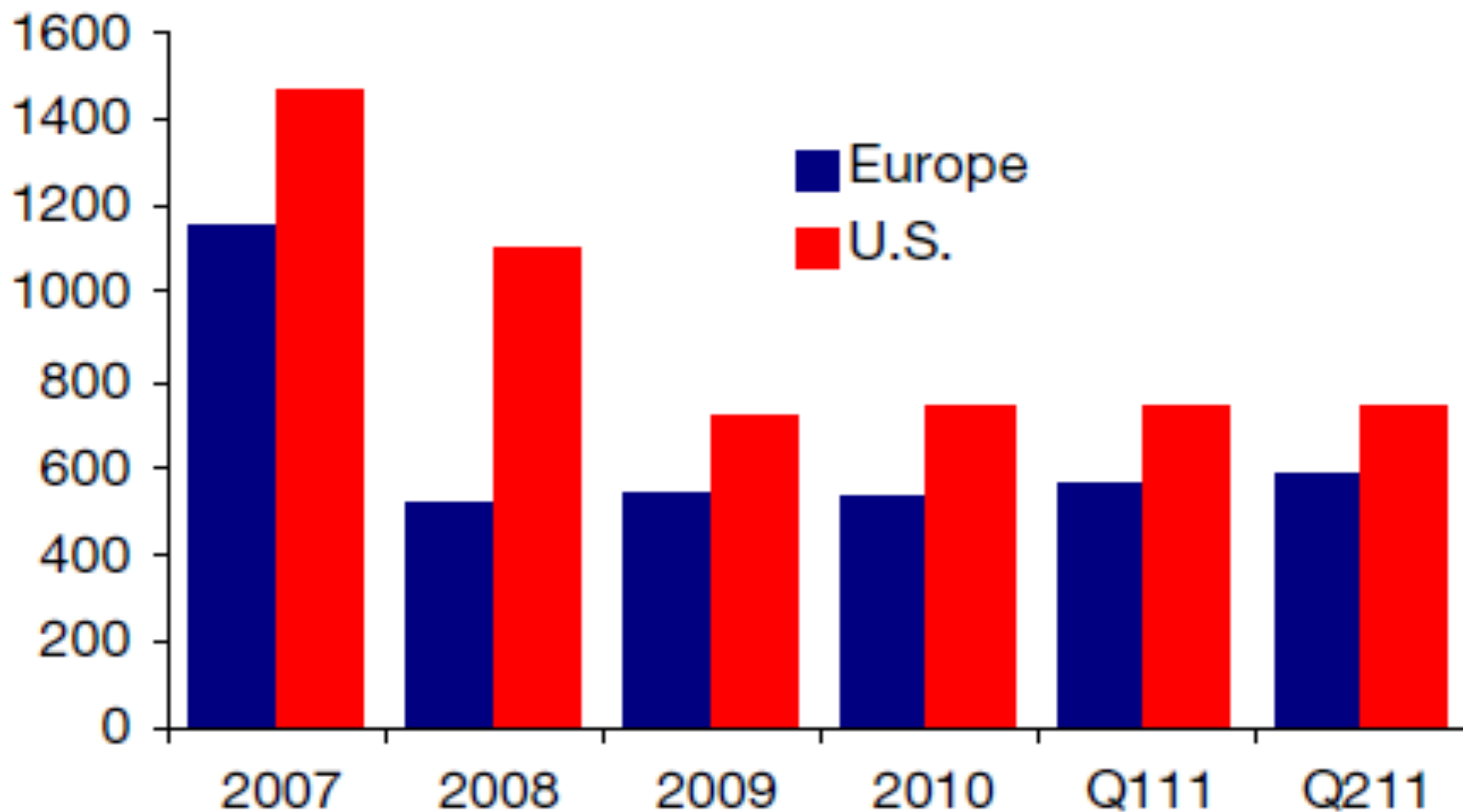
dealers  Investment banks
indipendenti

Modalità di finanziamento

- Per procurarsi il CASH, che deve risalire la catena dell'intermediazione e deve arrivare al borrower finale, si va sul mercato monetario dove il cash è offerto in cambio di garanzie rappresentate da titoli (securities lending) (Tav. 10 e Tav. 11).
- Il contratto base è il REPO (e il TRIPARTY repo) (=Cash Contro Titoli) perché è Bankruptcy exempt.
- Il securities lending realizzato con contratto di repo è quindi la fonte di cash.
- Il REPO HAIRCUT è lo scarto tra l'ammontare dei titoli e l'ammontare del cash.
- Il REPO HAIRCUT determina quindi l'ammontare totale di cash che si rende disponibile per finanziare l'intera catena dello Shadow Banking.

5 U.S. and Europe Securities Lending Volume

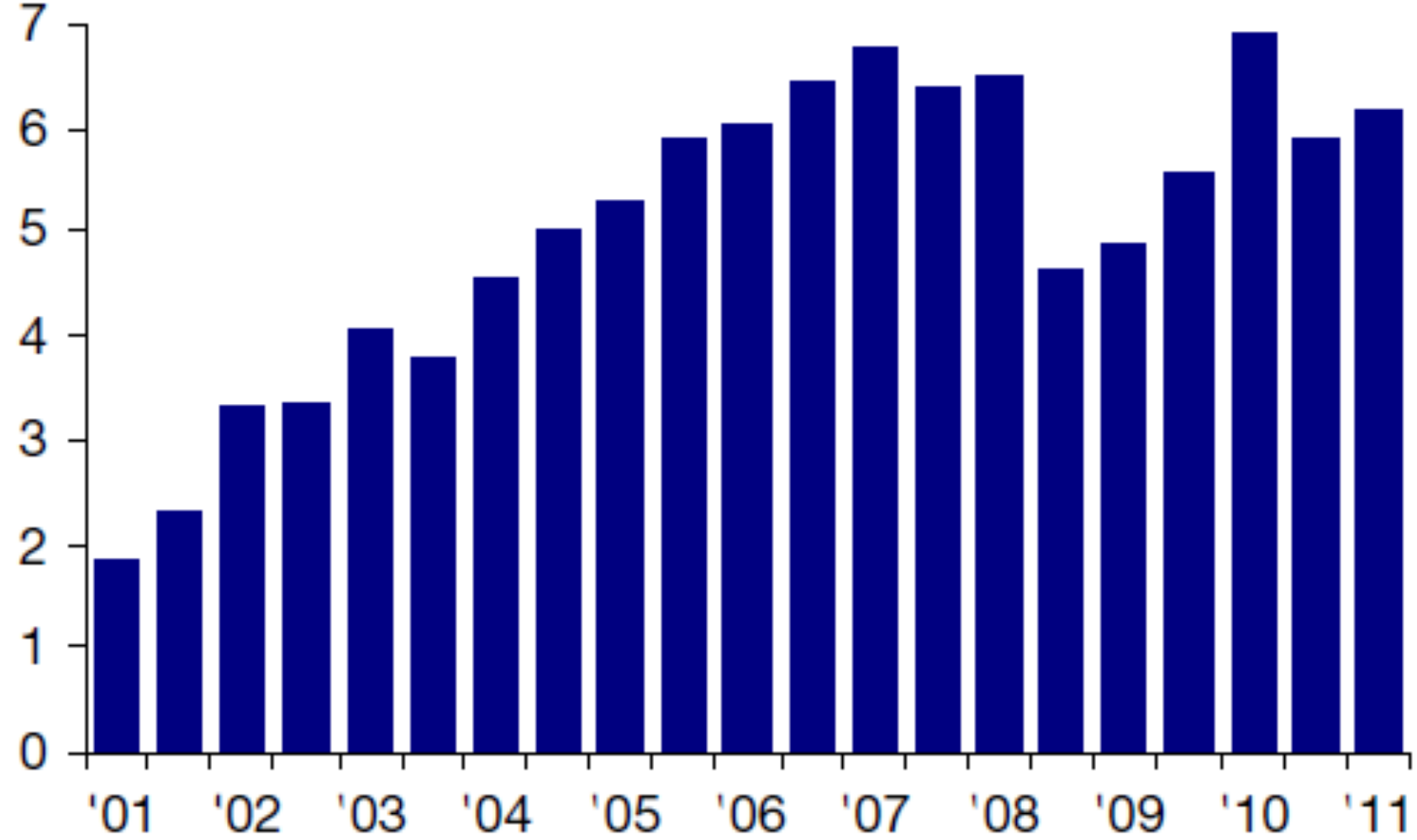
USD billions



Source: Data Explorers and IIF calculations

8 European Repo Volume

EUR trillions



Source: ICMA European Repo Market Survey

LA CRISI

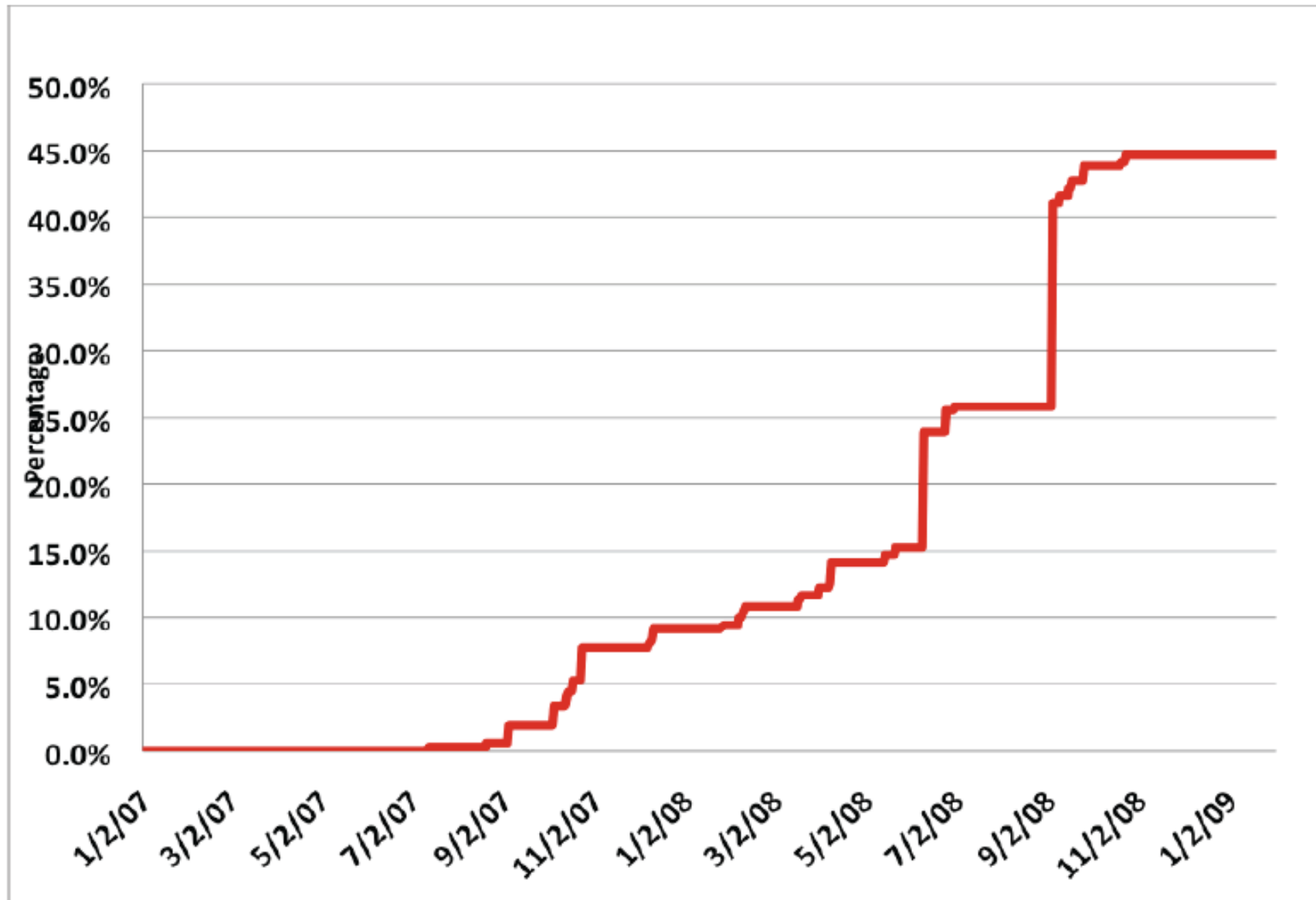
- Le prime avvisaglie sulla qualità della rischiosità di alcuni securitized products portarono il repo haircut dallo 0% a poco meno del 10% tra settembre a novembre 2007.
- Da febbraio a novembre 2008 lo haircut passa da meno del 10% al 45%. Il mercato monetario si blocca. I cash providers non sono più disponibili a fare REPO (dare cash) in cambio di securitized product.

Le total liabilities dello Shadow Banking sono crollate dal 2007 al 2010 di \$5 trilioni.

La FED ha dovuto intervenire per salvare i mercati dei vari securitized products ed evitare che il sistema delle imprese e delle famiglie perdesse i finanziamenti.

Figure 4: The Repo-Haircut Index

TAV. 12

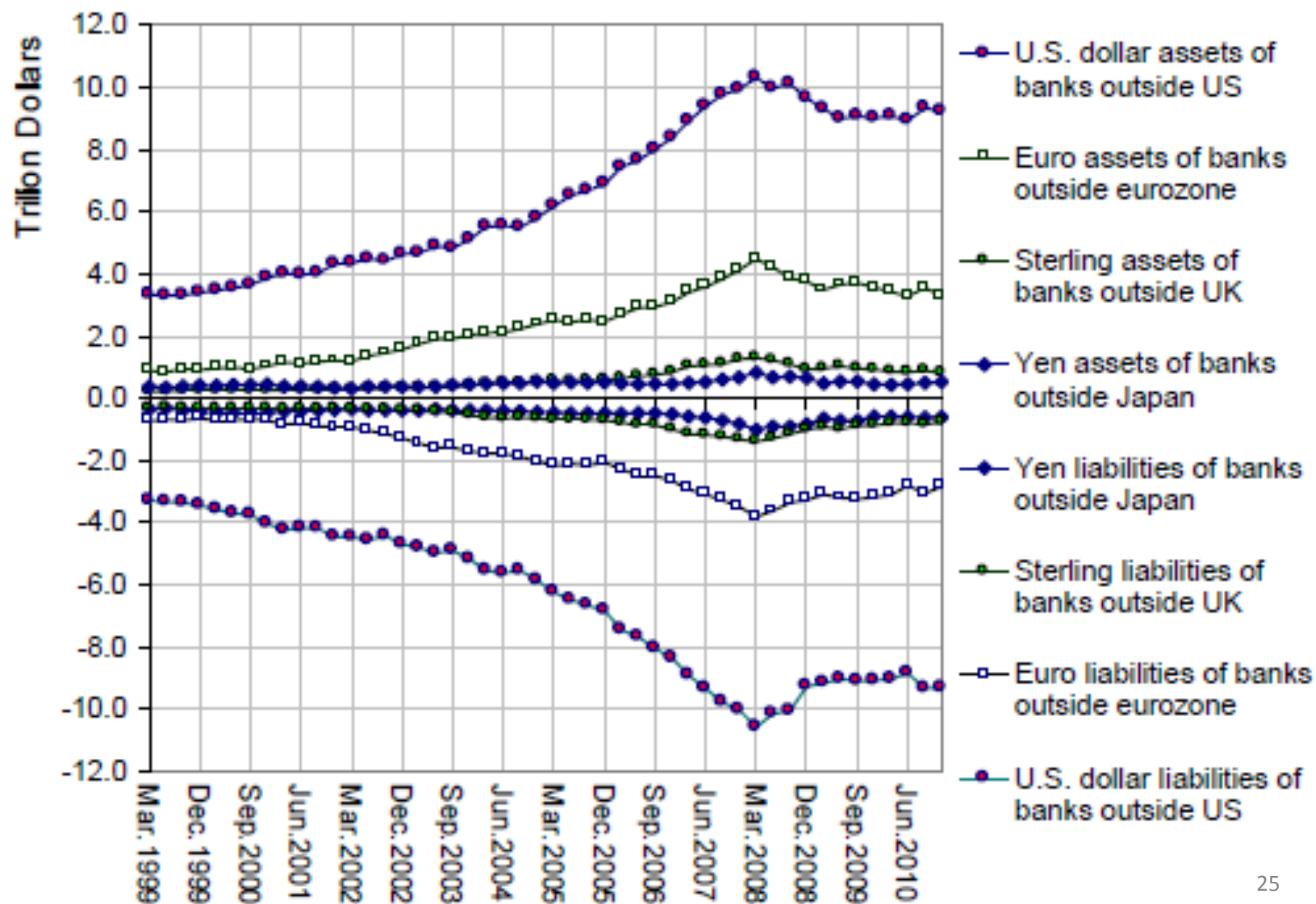


Notes: The repo-haircut index is the equally-weighted average haircut for all nine asset classes included in Table I, Panel D.

Il coinvolgimento delle banche Europee

- Le banche europee (banks outside US) sono i maggiori attori non USA sul mercato degli US \$ assets and liabilities (Tav. 13).
- La Tavola 14 illustra come queste attività sul mercato Americano sfuggano alle regole di Basilea (Δ fra ToT Assets – RWA) e quanto le stesse banche fossero esposte a relativi rischi.

Foreign currency assets and liabilities of BIS reporting banks by currency



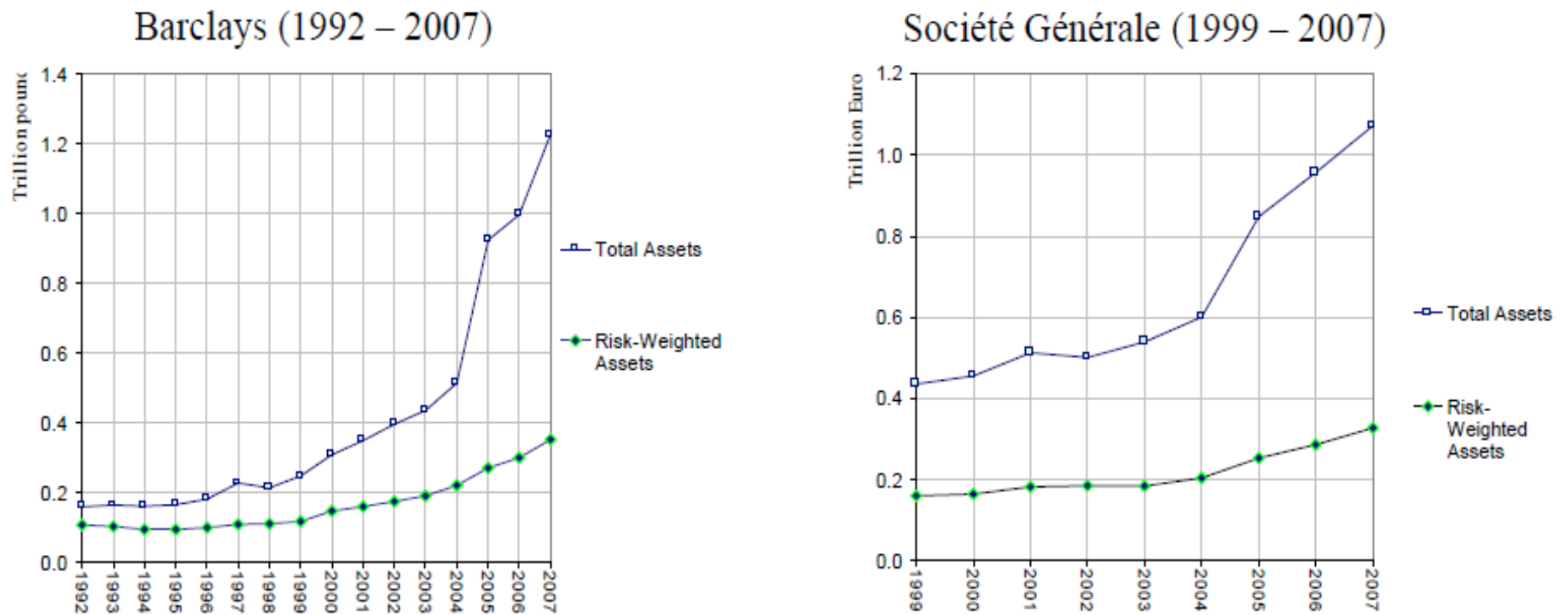


Figure 4. Total assets and risk-weighted assets of Barclays and Société Générale (Source: Bankscope)

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