

## REMARKS ON “CHAPTER 2” OF THE FINANCIAL CRISIS

### 1. INTRODUCTION

A personal story shall serve as an introduction to the financial crisis topic. I was talking with my father a few weeks ago about my family’s history and noticed a namesake – my great-grandfather in the chart – and asked what had happened to him. He lived in Iowa, in the middle of the US. He was a farmer, apparently good at breeding strong horses, and was also involved in a local bank. But he was not particularly good at the banking side, and when banks started failing in the 1930’s all across the Midwest, he lost everything. It’s an interesting personal window on banking and deposit insurance for the “little guy”. We often deal with these issues at an abstract, high level – but what all of us do is extremely important to the prosperity of these little guys.

A while ago everyone thought the crisis was over. But it seems there are a few “chapters” to this crisis. The first chapter was triggered largely by mortgage and financial excess, and then spread via financial contagion through the banking system to even the biggest of banks. Ultimately, it took extraordinary government action to control it.

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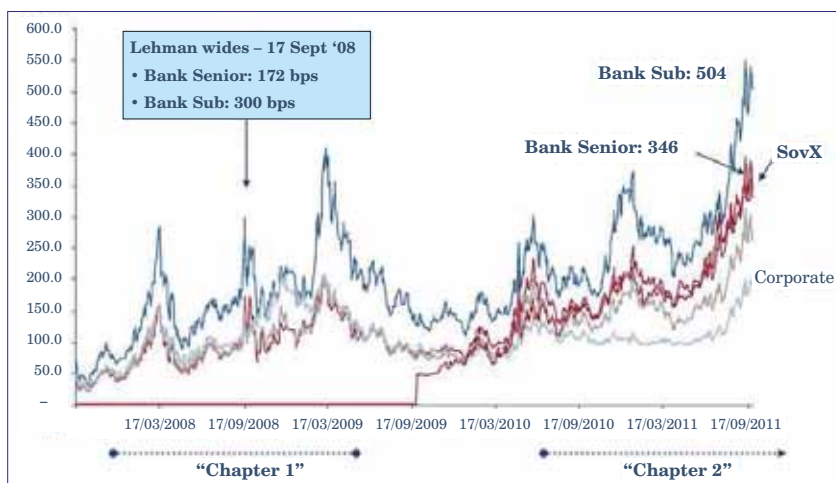
## 2. WHAT DO WE KNOW ABOUT “CHAPTER 2” OF THE FINANCIAL CRISIS

We are now in chapter 2. We know it has a different trigger but we do not know how it will end. Therefore, what do we know about chapter 2? First of all, sovereign debt is no longer considered risk free. Secondly, chapter has 2 intertwined crises, meaning that sovereign woes and financial stress are interrelated with each other. That is a fundamental, almost a Gordian knot, type of problem. That has given rise to a sense of chronic and endemic crisis and meant that a fundamental solution has been elusive. All the exits seem to be blocked. New money has become extremely wary of the financial sector. Debt investors now believe they are truly at risk when they invest in banks. That may be a good structural feature – during the previous crisis they were immune. Policy makers have done a lot of good, hard work in the U.S. and in the E.U. to put debt investors on the hook for their investments. That is important in separating the financial and sovereign aspects of the crisis but it is not enough – current markets assess this risk way above the fundamentals.

The financial conditions are likely to dominate the short term economic outlook. You can see that to some extent in trading, you have a highly correlated, “risk on”, “risk off” mindset in the markets. And that is a useful parallel for the real economy, where we have possible binary outcomes: possibly a severe double dip or a nice rebound. A lot of that depends on our policy choices from here.

We have looked at some financial markets graphs for chapters 1 and 2 of this crisis.

**Chart 1. European debt market trends**



Source: Credit Suisse, as at 28 September 2011; spreads are for 5 year debt instruments.

You can see a few key themes here:

- ❖ first is the return of serious fear in chapter 2 – fear that approximates the level during the darkest days of the first chapter of the crisis.
- ❖ second, the fear in the sovereign sector has moved up, especially in Europe. That is quite different from the first phase, and matches, almost exactly, to what is happening to the bank senior spreads in Europe. Obviously, the sovereign crisis and the bank crisis are intertwined, not just conceptually, but in the mind of the market.
- ❖ third, bank senior spreads are 346 basis points – what does this mean? In present value terms, this means investors are pricing in about **17% expected loss over 5 year period** for senior bank paper. That is an expected loss on a gigantic scale for their assets – enough to eat through equity, capital securities, subordinated securities, and well into senior paper. That is much bigger than what we saw from the most troubled banks in the crisis, which illustrates the degree of fear sitting with debt investors. It is an important issue to address specifically with some policy actions.

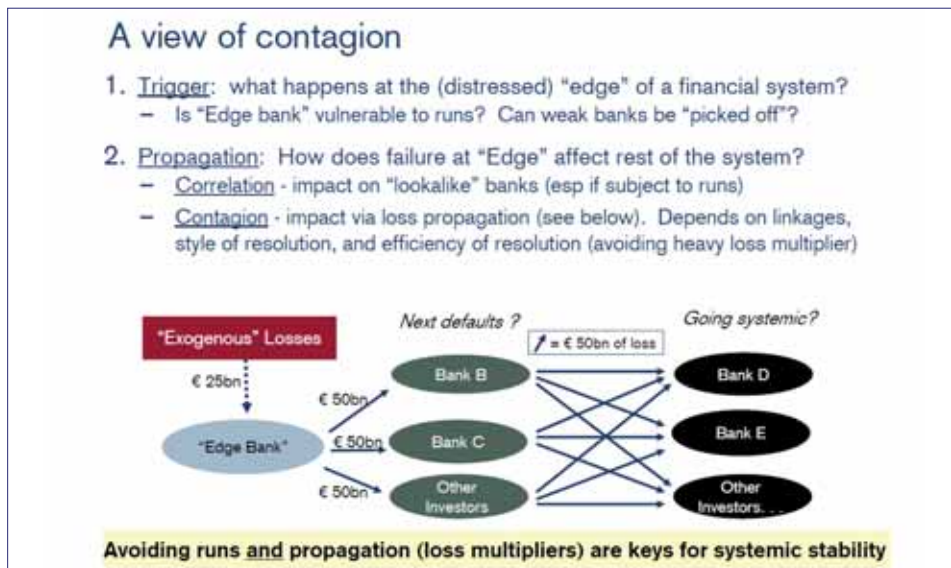
Why is this occurring and what are possible ideas for solutions? First, some thoughts on the contagion – it relates to two factors: a trigger and a propagation mechanism. A trigger is what happens to banks that are in the greatest distress at the edge of the financial system. Is the “edge” bank vulnerable to a run – whether it is a 1930’s style run or a 2008 style run? Can weak banks be picked off and transmit that stress to the next bank? Secondly, how do these fears get transmitted through the financial system – how does the failure of the edge bank impact others?

The focus is on two channels:

- ❖ correlation to “lookalike” banks. If people see a failure at a certain institution, they immediately read across to institutions that look a lot like the failed bank: “better get out of the lookalike”. That is especially an issue where a bank is subject to runs if there is trouble at the edge of the system.
- ❖ contagion – how do direct losses propagate through the system? If failure is disorderly and expensive – the failure at the edge bank can create ballooning losses for the rest of the financial system- then we can put a lot of stress on the whole system. In the given case, there was a 25bn loss at the edge bank that was enough to push it over, but where the losses to its liabilities were 6 times larger. That kind of system puts a significant load on the downstream parts of the financial system. If that is enough to knock off that next tier of banks, it can propagate further through the system and start to lead to the fear and gridlock that gripped a lot of the financial markets in 2008 and 2009. Therefore, avoiding runs and propagation are the keys to solving contagion and avoiding financial lockdown.

What does this mean for today’s crisis in chapter 2?

**Chart 2. A view of contagion**



Source: Author's slide no 5 of the presentation at the Conference session.

**Chart 3. Chapter 2: Does Greece = Lehman?**

- Would default give new information re: "too big to fail" policy for sector?
- Size: Lehman liabilities = ca \$600bn vs Greek debts = ca €350 bn
- Loss given default was severe in Lehman (91% senior (CDS) loss)
- Market shock: Lehman traded @~85% pre-BK; Greek debt much lower
- Accrual books: 21% Greek loss recognized in Q2 without major damage
- Complexity: far fewer financial links (e.g. swaps, repo) in Greek case
- At Lehman failure, several "lookalikes" also in distress / run situation
- Authorities seen to be unprepared for Lehman: "no plan B??"
- Ability to stem contagion was unclear (though sovereign credit was largely unquestioned in '08)
- Rules of the road were deeply uncertain and unpredictable

Source: Author's slide no 6 of the presentation at the Conference session.

Triggers: does Greece equal Lehman Brothers? There are a few factors on either side of this. Would the default of Greece be “new information” to the market that was as unexpected as the failure of Lehman was to many? There is a question of size – Lehman had a 600bn balance sheet and Greek debts are not so different in scale. There are some differences, however.

The loss given default in Lehman was severe. Debt traded in the single digits the following week, meaning that losses were something like in 91% in senior debt. These bonds have rebounded since then but losses were still severe. Secondly, the market was unprepared for what Lehman debt was trading in the mid-80’s and the week before – the difference was gigantic. In Greece we have already seen markets trade lower so they are better prepared. We’ve already seen a 21% loss taken through the accrual books in many of the major banks in Europe without huge damage.

Lastly, complexity – there are far fewer financial links in Greece, when compared to what an institution like Lehman would have through swaps or repo.

Overall, there are both some important similarities and differences. In Lehman there were several lookalike banks that were also under stress. But the same issue may be applied to certain peripheral sovereigns in Europe – are they sufficiently analogous or sufficiently different? In terms of preparation, the authorities seemed to be unprepared for the Lehman failure. That was a surprise and there was no “Plan B”. And the ability to stem contagion was unclear at that time. And finally, one thing that was true then and is true today is that the rules of the road were deeply uncertain and unpredictable. When the markets do not know the rules of who will get what and what is going to happen to their investments, they have a tendency to break down and become dysfunctional.

### 3. A FEW CONSEQUENCES FOR POTENTIAL SOLUTIONS

What may that imply for potential solutions? Is this Gordian knot of banks and sovereigns that are intertwined – is this something we are stuck with or something we can solve? Probably, more capital and efficient bank resolutions are the keys to cutting this knot. In particular, the bail-in resolution is an important tool to separate these two crises and to help mitigate contagion. It could access trillions of Euros of additional potential equity capacity if needed. If the rules were predictable and clear ex-ante, it would actually tighten spreads and help re-open markets. That is a controversial statement in many banking circles – but bringing predictability back to the system will do wonders for how investors respond to banks. It would help establish a more stable economic process – more sustainable rules of the road that would help the economy and the financial sector to revive.

What does bail-in look like? Here is one example to put a more tangible face on what this means.

**Chart 4. What a Bail-in might look like – example**

<u>Old Balance Sheet</u>	→	<u>New Balance Sheet</u>
\$600 bn assets .....		\$575 bn (i.e. \$25 bn write-down) .....
\$430 bn “franchise” liabilities (deposits, repo, swaps, payables)		No change – remains at par
\$120bn senior debt		15% new equity (85% unchanged)
\$ 25bn preferred & sub debt		new equity
\$ 25bn equity		write-off or warrants

- Equivalent to a high-speed Chapter 11 for banks
  - “NewCo” now well capitalized (well-priced assets and \$43 bn fresh capital)
  - No government capital at risk – *not* a bail-out
  - Customer activities continue as normal – going concern
  - Can be done directly via recapitalization, or via bridge bank tool

Source: Author’s slide no 8 of the presentation at the Conference session.

On the left-hand side of the chart below is a simplified balance sheet of a financial institution with 600bn in assets. It is funded by 430bn of “franchise liabilities” including deposits, repo funding, payables in the transaction system, as well as several classes of investor capital – equity, preferred stock and senior debt. Moving to the right hand side, let us assume that some of those assets are troubled. If you have 25bn of imbedded losses from a financial crisis and bad decisions, that means your assets are only worth 575 bn now. Because balance sheets have to balance, the difference has to go somewhere. In a bail-in, we would not touch the franchise liabilities – depositors, market transactions, collateralized transactions. Instead, losses would be applied to investor capital, and equity would be the first source of loss absorption. In this case, if we had to absorb the 25bn losses that would exhaust the amount of existing equity in the bank, and we would have to create new equity going forward. Therefore, we would turn the junior classes into equity and a small slice of the senior debt.

This would leave us with 43bn of equity capital in the new institutions against well valued assets. This new company would be very well capitalized. No government money would be used here – market activity would continue as normal. If we had these tools in 2008, we could have had very different outcome then we do today.



What is the reason for the strange numbers? These are basically the numbers of Lehman Brothers in 2008. If you had had the restructuring we show on the right hand side of the chart instead of the disorderly bankruptcy that did occur, we would have had a dramatically better outcome.

**Chart 5. What Bail-in might look like – Impact on the System**

	<u>Actual Lehman</u>	<u>Bail-in Pro Forma</u>
1) Equity	wipe out	warrants
2) Sub debt	wipe out	shares
3) Senior debt	10% to 25%	~par (85% + shares)
<b>Investor Impact</b>	<b>~\$150bn of loss</b>	<b>~ \$25 bn loss</b>
– Customers*:	large losses	no loss
– Counterparties*:	large losses	no loss
– Markets:	massive unwinds & deleveraging	relief rally?
– Know Result?	up to 10 years	now

*\*Incentive for customers/counterparty run is very different between 2 scenarios*

Source: Author’s slide no 9 of the presentation at the Conference session.

If we look at what that outcome would have meant for the system compared to what actually happened in the Lehman case, there are also large advantages. Bankruptcy wiped out the equity and the sub-debt – the senior debt bounced back a little bit but it still took huge losses. The total investor impact was well over 150bn.

If we could have restructured this like we do with many corporates in the U.S. in a more going concern recapitalization, perhaps it would have been possible to limit those losses to the intrinsic ones on the balance sheet or about 25bn. Importantly, customers and counterparties could have been saved from loss. Instead of a market free fall, we would have seen a relief rally.

Importantly, in this system, the customers and the counterparties have much less incentive to run. Unfortunately, the incentive to run was all too rational in 2008. In the bail-in system, that incentive has been removed. It does not mean runs will be eliminated entirely, but taking the economic incentive out of the picture changes the game quite dramatically.

The lower loss percentages to the investor class would also be important. For example, in the Lehman bail-in scenario, we would not see the money market fund at The Reserve Fund break the buck the next day, which was an event that transmitted the stress into another sector of the financial system in the U.S. We would see a fairly transformative difference if you think about contagion in terms of triggers and propagation – if you move from what we had in 2008 to a system that involved creditor finance recapitalization or bail-in.

#### **4. CONCLUSION**

In conclusion: our current situation is complicated, with interlocking crises and some major sovereign issues that need to be addressed. But it is also critical to separate the sovereign crisis from the financial crisis. Separation gives a much better chance at resolving each one of these crises.

Bail-in could be a key tool to address the financial side of this crisis. It would avoid tax-payer bailouts and the stress on government finances. It creates new equity for the system, at the point where it is needed, that can help avoid a deleveraging cycle. The amount of capital it can access is huge, literally trillions of euros. It can handle bigger crises than 2008.

Many people are wary of a clear, strong financial reform, which would be a dramatic change. We should be more concerned about not having such a reform. Previous crises have been met successfully with strong reforms, for example in the 1870's, where we saw the invention of modern central bank. In the 1930's we created deposit insurance in the U.S., and eventually in other countries. These have proven to be transformative economic reforms – fundamental advances that lasted and strengthened the financial system. “Too-big-to-fail” is probably the key challenge of our times. It is not easy to solve, but it is not impossible. And failure is simply not an acceptable option.