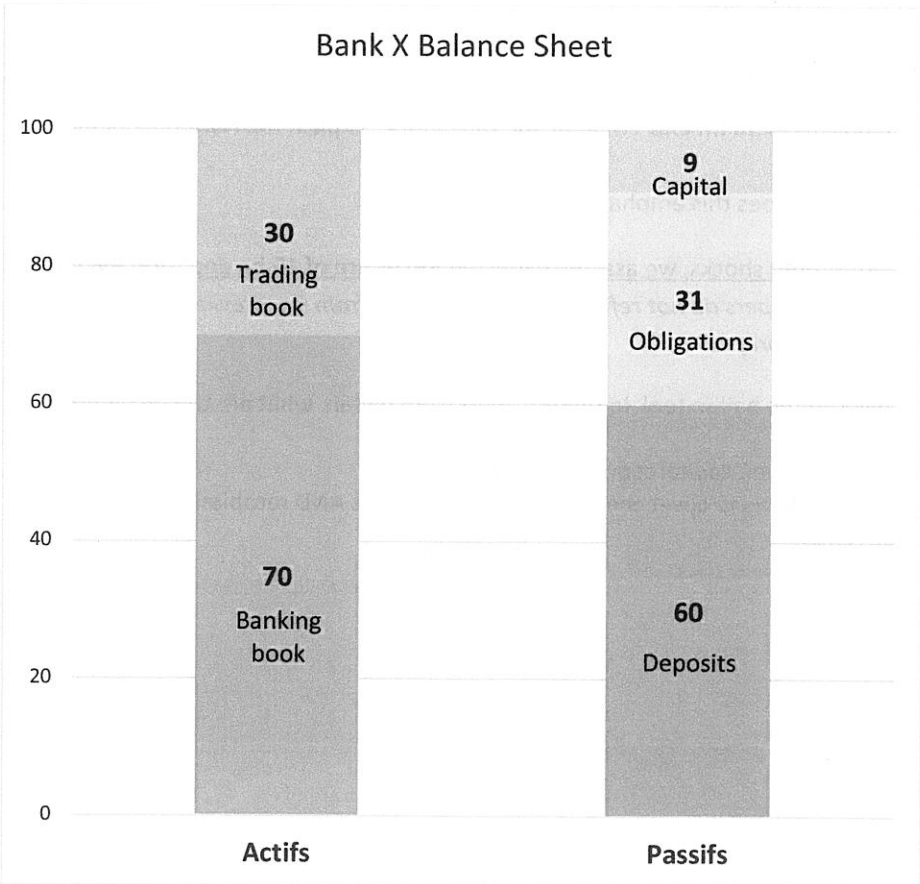
Financial regulation – Exam – 2020/2021

Feel free to write your answers in English or in French but stick to a single language. **Concision will be gratified**.

1. Describe the legislative process of a banking regulation, from the events that trigger the push for a new piece of regulation, to the regulation being enforced on the trading floor. You can illustrate the process using a real case like Basel III capital requirements or EMIR. Explain using words and diagrams, and name the relevant stakeholders.
2. In our modern societies, by whom and how money is created in normal times, and in exceptional times?
3. Climate risk would translate into financial risk in which ways? (3 risks + examples).
4. Please elaborate on a possible way you can think of to address this climate risk in the financial regulation.
5. What mechanism(s) allow(s) the absorption of counterparty credit risk for OTC derivatives? Which European legislative text makes it mandatory? In which risk this mechanism has transformed credit risk?
6. What is the difference between the Council of Europe, the European Council and the Council of the EU?
7. Describe using words and diagrams the subprime crisis vehicles (risk transfer and instruments). Again, concision will be gratified.
8. Describe the difference between RWA and LBS ratios, including pros and cons of both metrics.
9. Define and explain the difference between going concerns and gone concerns capital.

Case study

Let's consider the following bank. Numbers in billions (bn).



Corporate Loans	Risk Weight (Standard approach)
AAA	20%
AA	20%
A	50%
BBB	100%
BB	100%
B	150%
Junk	150%

- The **banking book** is exclusively composed of **Rated Corporate Loans**
- **Funds are evenly distributed across the 7 rating buckets (10 bn of AAA loans, 10 bn of AA loans, ..., 10 bn of Junk)**
- The **trading book** is exclusively composed of GBP LIBOR swaps. We assume its initial **RWA is 15.**
- We assume bank X has a **10% capital requirement ratio** to sustain.
- We assume that the market risk RWA and the Initial Margin (IM) are both 1-day VaR at 95%.

A. Let's assume a **downgrade event** on the entire banking book (AAA loans become AA, ..., B loans become Junk).

1. What is the banking book RWA before and after the downgrade event?
2. Is bank X CRR compliant before the credit event? After the credit event?

B. Let's look at the **trading book**. We assume the portfolio has the following sensitivities

- GBP Libor Delta (sensitivity per basis points (bps)) = 0.1
- GBP Libor Gamma = -0.001

Rates are now expected to **move down by 50 bps** after a decision from the BoE

1. What is the new trading book RWA?
2. After both events (credit downgrade and rate decrease) is bank X still CRR compliant? If not, how much is missing?
3. What are the expected losses after the rate move?

C. **Clearing:** let's assume the trading book is cleared.

1. What does the bank will have to post as extra IM and VM after the rate shock? Explain the reasoning behind your assumptions.
2. Which downside of the clearing process does this emphasize?

D. **Resolution:** Let's round numbers up. After both shocks, we assume expected **losses are of 15 bn** and **total RWA is 50** (means capital requirements are 5 bn) *(these numbers **do not reflect** the right answers from the previous questions but are there in case you did not find the answers before)*

1. To resolve the failing bank, we will use the bail-in tool. In theory, apart from bail-in, what are the resolution tools that can be used?
2. How much MREL the bank should have given capital requirements are of 5 bn?
3. Is there enough capital and bailin-able debts to cover the losses? To cover losses AND recapitalise the bank?
4. Can the SRF intervene to provide funds?