Axa Financial case study

Answers by Pascal Quiry (18 May 2001)

1. Rank Axa Financial's activities in Spring 2000 in decreasing order of risk.

In Spring 2000 (before the disposal of DLJ), Axa Financial's activities in decreasing order of risk, i.e. from the most to the least risky, were as follows:

- The investment bank (DLJ), as its business is highly dependent on the economic situation and the health of the financial markets, and especially since DLJ is positioned on one of the riskiest segments – high yield (or junk) bonds. It has a β of 1.92

- Its life assurance business, because if the stock markets do well, some of the capital gains on investment portfolios go to the the insurance company, and not to the insureds, and if the stock markets do badly, this amount can be very tiny indeed

- The investment management business where the asset managers income is equal to a percentage of the funds under management and where the investor assumes the stock market risks, but not the asset manager who does not guarantee the performance

2. From a conceptual point of view, what did Crédit Suisse get in exchange for the control premeuium that it agreed to pay to acquire DLJ which justified paying this premium for its shareholders? The DLJ share was trading at $60 before Crédit Suisse's $90 offer.

In exchange for the control premium it paid, Crédit Suisse got the value of the synergies that can be put into place between its investment banking subsidiary (CSFB) and DLJ, whether these are costs synergies (reduction of overall costs) or revenues synergies (increase in overall revenues), which is why DLJ was worth more to Crédit Suisse than it was to Axa or to the capital market.

3. Should the disposal of DLJ and the investment of all of the proceeds from the sale in Axa's US assets result in a drop, a rise or in no change in the cost of Axa's equity? Why?

When it divested DLJ, Axa disposed of Axa Financial's riskiest business and used the proceeds of the sale to buy out Axa Financial's minority shareholders, i.e. it strengthened its economic intereset in Axa Financials least risky assets. Accordingly, Axa's risks have been reduced, which means that its cost of equity should drop.

4. **Knowing that DLJ was sold on the basis of a 2000 P/E ratio of 18.2, and that the Axa Financial minority shareholders were bought out on the basis of a P/E ratio of 17.5%, paid in Axa shares which had a 2000 P/E ratio of 26.3, and in cash at an after tax cost of 5%, was this double transaction earings enhancing or did it dilute Axa's EPS before depreciation of goodwill? Why?**

A distinction has to be drawn between investment and financing. From an investment point of view, Axa sells assets on the basis of a P/E ratio of 18.2, and reinvests the proceeds from the sale on the basis of a P/E ratio of 17.5. As the P/E ratio of the assets sold is higher than the P/E ratio of the assets acquired, this transaction will enhance Axa's earnings per share.

From a financing point of view, Axa finances the transaction using Axa shares, which have a P/E ratio of 26.3, and cash at an after tax cost of 5%. The accounting profitability of the asset acquired in the first year is 1/P/E ratio, i.e. 1/17.5 = 5.7% for an accounting cost of financing of 1/P/E ratio, i.e. 1/26.3 = 3.8%, for the portion paid in shares, and 5% for the portion paid in cash, which are both lower than 5.7%. The transaction is thus earnings enhancing from an accounting point of view.

This double transaction enhances Axa's EPS before depreciation of goodwill.

5. **In the insurance sector, practically all analysts look at figures after depreciation of goodwill. On this basis, the buyout of Axa Financial's minority shareholders dilutes Axa's EPS by around 2%. How do you reconcile this with your answer to question 3? Does this seem logical to you? Why?**

Axa's cost of equity drops following the sale of DLJ, since the risk of its capital employed decreases (see question 3) and as the amount of Axa's equity is not affected by this transaction, it is only logical that Axa's EPS should fall, resulting in a lower required return after the disposal of DLJ.

The dilution of Axa's EPS after the sale of DLJ is perfectly logical. EPS before and after a transaction (acquisition, disposal, capital increase or reduction, etc.) can only be compared and serve as a basis for conclusions on the creation or destruction of value, if the level of risk and growth is the same before and after the transaction in question.

6. **Does this double transaction create or destroy Axa shareholder value? The Axa Financial minority shareholders were bought out on the basis of net asset value per share, or $53.50. The Axa financial share was trading at $52.25 after the announcement of the disposal of DLJ and before the announcement of the buyout of the Axa Financial minority shareholders.**

a) Sale of DLJ

The sale of DLJ creates value for the Axa shareholder equal to the amount of the control premium paid by Crédit Suisse, and which is the counterpart of the synergies that Axa was unable to put into place: 50% (control premium) x $6.9bn (DLJ's market cap before the sale) x 60.3% (Axa's stake in Axa Financial) x 70% (Axa Financial's stake in DLJ) = $1.46bn.

b) Buyout of Axa Financial's minority shareholders

Excluding the synergies between Axa and Axa Financial, the buyout of the Axa Financial minority shareholders by Axa destroys value equal to the amount of the premium paid $\left(\frac{53{,}5-52{,}25}{52{,}25}=2{,}4\%\right)\text{soit } 2{,}4\% \times 18{,}1\,\text{Md\$} = 434\,\text{M\$}$.

It could be considered that there is no actual destruction of value, given that Axa buys out the Axa minority shareholders on the basis of net asset value, and the premium paid merely sets off the discount compared with NAV.

On the whole, this <u>double</u> transaction creates value for AXA in the amount of at least 1.45 - 0.434 = $1.120bn.

This illustrates that the "rule" that enhancing EPS = creation of value and diluting EPS = destruction of value, is a very hard and fast rule, and that it cannot be applied whenever a financial operation (capital increase or reduction, acquisition, disposal, merger, demerger, etc.) modifies the risk of the activities (as is the case here) or their prospects for growth.

7. **What are the circumstances in which the buyout of minority shareholders in the subsidiaries of a parent company can create value for the shareholders of the parent company? Comment on the size of the premium offered by Axa to the Axa Financial minority shareholders.**

The buyout of minority shareholders creates value for the shareholders of the parent company when:

- The shares in the subsidiary are bought at below their equilibrium value, which in efficient markets, or when corporate governance is adequate, rarely happens
- Flows between subsidiary and parent company circulate more freely - reduction of tax inefficiencies, minority shareholders no longer legally able to oppose decisions
- It becomes possible to implement synergies between the parent company and its subsidiary that previously could not be put in place. Most of the time, they should already have been implemented
- It leads to the elimination of any discount that the parent company may be trading at due to its holding company status. A holding company is a company which has minority stakes in diversified businesses, usually with no control over management, which has a stake of more than 95% in a single asset in LBO type transactions

Axa paid a very small premium (2.4%) which only brings the value of the Axa Financial share up to the level of net asset value per share. Unsurprisingly, the new synergies between Axa and Axa Financial should not be very high.
P.S.: Axa cannot really be described as a holding company (see definition above).

8. **Calculate the change in Axa's beta which results from this double transaction. Use the following figures:**

   Axa Financial's beta before the operation: 1.32
   DLJ's beta: 1.92
   Axa Financial's market capitalisation: $18.1bn
   DLJ's market capitalisation before operation: $6.9bn

Axa's market capitalisation before operation: $58bn
Axa Financial's stake in DLJ: 70%
Axa's stake in Axa Financial: 60.3%

All of the proceeds of the sale of DLJ are reinvested in buying out Axa Financial's minority shareholders, since the amounts correspond exactly after the sale of the Crédit Suisse shares received.

Since all of the proceeds of the sale of DLJ by Axa Financial are used to buy out the Axa Financial minority shareholders, the change in Axa's beta resulting from this double transaction is equal to the difference in beta between that of DLJ and that of Axa Financial's other assets multiplied by the relative share of DLJ's stake in the value of Axa.

i.e.: share of DLJ in Axa: $6.9bn (DLJ's market cap before the sale) x 60.3% (Axa's stake in Axa Financial) x 70% (Axa Financial's stake in DLJ) / $58bn (Axa's market cap) = 5%.

$\beta\beta_{\text{Axa Financial}} = \beta_{\text{DLJ}} \times$ share of DLJ in AF + $\beta_{\text{other AF assets}} \times$ ((1 – share of DLJ in AF)

$$1{,}32 = 1{,}92 \times \frac{70\% \times 6{,}9}{18{,}1} + \beta_{\text{autresactifsAF}} \times \left(1 - \frac{70\% \times 6{,}9}{18{,}1}\right) \text{d'où } \beta_{\text{autresactifsAF}} = 1{,}1$$

$$\Delta\beta_{\text{Axa}} = 5\% \times (1{,}1 - 1{,}92) = -0{,}04$$

Axa's β should thus fall by 0.04 after the sale of DLJ and the reinvestment of the proceeds of the sale in Axa Financial's other assets.

9. **If the market risk premium were 3%, what would the impact be of this double operation of the cost of Axa's equity?**

If Axa's β falls by 0.04 and the risk premium is 3%, using the CAPM formula (r = rf + β(rm – rf)), the cost of Axa's equity should fall by 3% x 0.04 = 0.12%.

10. **Does this mean that in the future, Axa should require a rate of return on new investments that factors in this new cost of equity? Why?**

No, it is only the return on equity of the whole Axa group that has fallen by 0.12%, and this rate is only used to appreciate the return on equity of the Axa group as a single entity.

Otherwise, on each individual investment made by Axa, the required return on equity on these investments does not factor in the risk of the investment and the related financial structure.

The fall in the cost of Axa's equity resulting from the sale of DLJ and the reinvestment of the proceeds of the sale in Axa Financial's other assets, does not impact on the required rate of return on Axa's various investments.