

The Construction of the Eiffel Tower – Project Finance case 1

Gustav Eiffel was already a well-known and successful engineer and entrepreneur when he came up with a design of a 300-meter-high metal tower. He had built bridges and buildings all over Europe and US. He was famous for constructing a Statue of Liberty, which, though designed by Frederic Bartholdi, was held by a metal framework designed by Eiffel.

Eiffel's tower idea was revolutionary, it would be the tallest monument in the world. Eiffel worked on the concept since 1884 in order to have it built by 1889, in time for the World Exposition, commemorating a centenary of French Revolution. Eiffel lobbied intensely for his project to be accepted: he would meet with the politicians and the president of the Organizing Committee of the Exposition; he would place ads in newspapers. After two years of such labor, he convinced Lockroy, the president of the Organizing Committee of the Exposition to launch a tender for such a monument to be created, but the tender was so biased, it was obviously tailored to what Eiffel had in mind and the time given to the contenders to submit their plans was ridiculously short. Eiffel won easily.

The Concession Agreement

On July 8th, 1887, Eiffel, Lockroy and the representatives of the French government signed an agreement, specifying the location, financing and operation of the project. The 12-page long document stated that the tower would be erected in the 7th district of Paris, along the Seine River, with Eiffel taking a personal responsibility of designing, constructing and funding the project. The city of Paris was the legal owner of the tower, but he had a right to use and operate it for 20 years. Eiffel also received a state grant in the amount of 1,5 million francs, paid in three installments of 500,000 each, as each floor of the tower was completed. In other words, Eiffel benefited from the government funding, but had to start the construction using his proper means. He also agreed to cap the fees charged to the visitors.

It was de facto a concession agreement, created long before the term itself came into use: private entity was in charge of building and operating a piece of infrastructure, it received the revenues generated by this infrastructure for a certain period of time, and was subject to some basic rules imposed by the public authority, which allowed for that project to go forward.

Initial Difficulties.

The construction of the tower was to be done by Eiffel's company, "Les Etablissements Eiffel", with estimated project's total cost being 6.6 million francs, 6.5 million for construction and 100,000 in legal and structuring fees. So, Eiffel had to raise 5.1 million on top of 1.5 million in subsidies. He struggled to find partners – a 300-meter-high construction in the center of Paris looked risky from a technical point of view.

Eiffel hired a financial advisor to help him convince the banks to finance the project. He had to present it as a profitable affaire. The advisor built a very sophisticated for that time financial model, calculating how many people visited monuments in the world, deducing from that how many visitors the tower might attract. Using growth and inflation targets, he extrapolated the number of visits for the next 20 years, considering seasons, weather, workdays and weekends and arrived at the number of 5.1 million francs as project's operating cash for the next 20 years.

Thanks to this analysis, the banks agreed to finance the tower and the deal was signed in July of 1888, two months after completion of the first floor which Eiffel financed himself.

Financial Structure

The banks demanded Eiffel that he transfer all the rights and obligations related to the construction and operation of the tower to the “Société de la Tour Eiffel”, company established for the sole purpose of building and managing the project, with the share capital divided between two classes of shares:

- (i) 10,200 redeemable ordinary shares with a face value of 500 francs each, totaling 5.1 million francs, and
- (ii) 10,200 founders shares with no face value.

Both shares had the same right to dividends, which could only be distributed after the holders of the ordinary shares had entirely recouped their initial investment of 500 francs per share. Half of those shares were subscribed by Eiffel and half by the banks, meaning that they both invested 2.55 million francs each, the total capital distribution equaling 5.1 million francs.

Sources of Funds		Uses of Funds	
Subsidies	1.500.000	Construction cost	6.500.000
Redeemable shares (G. Eiffel)	2.550.000	Legal and advisory fees	100.000
Redeemable shares (Banks)	2.550.000		
Founders shares	-		
Total	6.600.000	Total	6.600.000

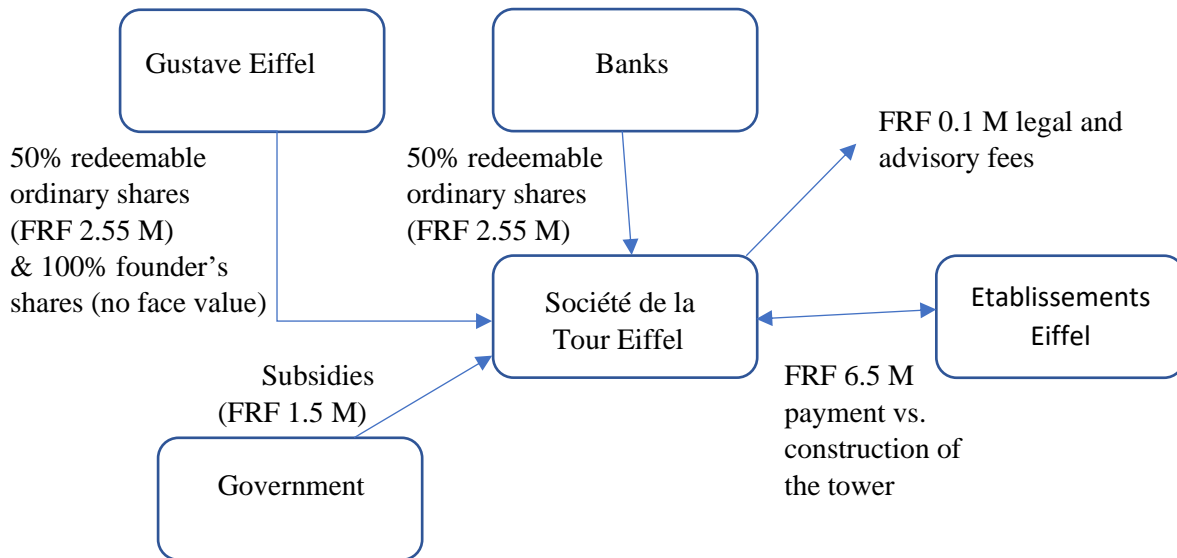
Source: Michel Lyonnet du Moutier – L’aventure de la Tour Eiffel

The founders shares with no face value, but with the right to the dividend distribution, were all allotted to Eiffel. Once the ordinary shares had been entirely paid back, there was no difference between the two kinds of shares.

The agreement specified that the banks had the option of buying 25% of the redeemable ordinary shares for 500 francs per share up to four months after the end of the World Exposition, and they had to sell 25% of the remaining redeemable ordinary shares – held by Eiffel – through a public offering. In return, they obtained 45% of the founders’ shares and a commission of 125,000 francs. Then all the parties were free to hold or sell their shares.

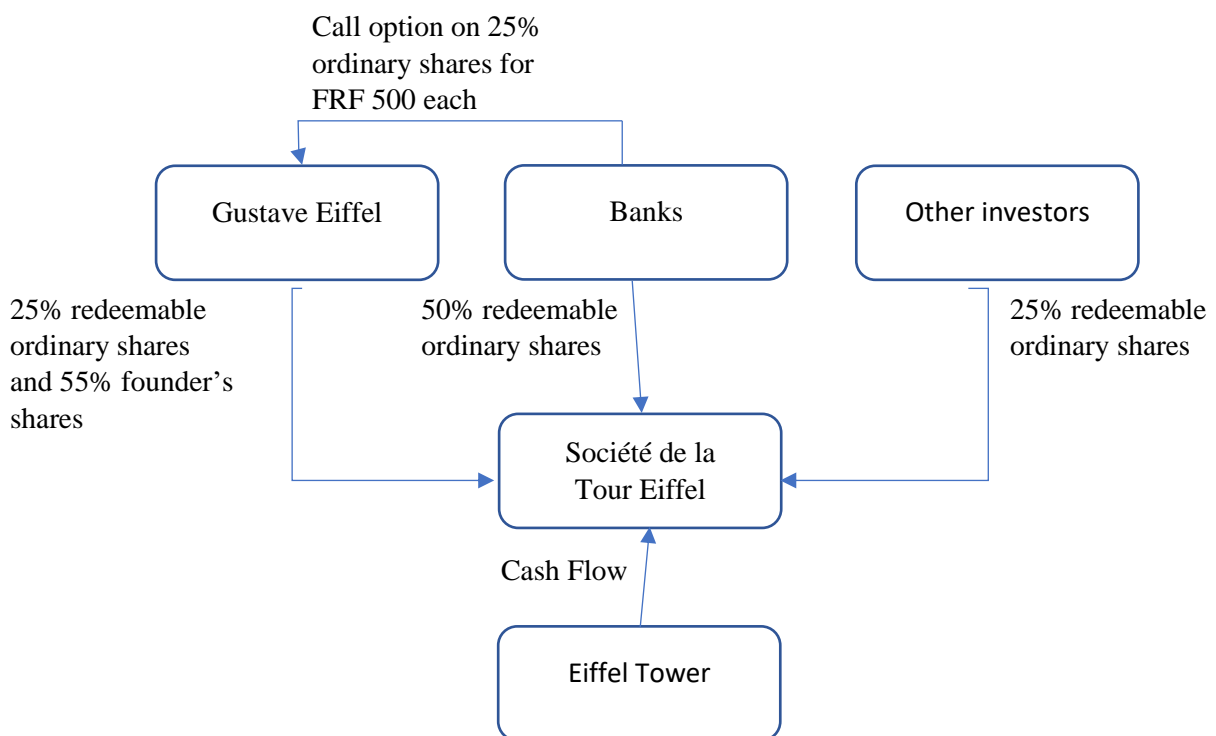
Financing structure of the Eiffel Tower

(Source : Michel Lyonnet – “L’aventure de la Tour Eiffel”)



Shareholding structure of the Eiffel Tower after construction

(Source : Michel Lyonnet – “L’aventure de la Tour Eiffel”)



After Construction

The construction of the Eiffel tower was an example of the industrial efficiency. It was completed within the planned budget, timeframe and without a single mishap. Eiffel counterbalanced the intense pace, set for the workers with a substantial salary increase, which was made possible due to optimization of the construction process.

The success of the construction was a financial boon for Eiffel and the banks. On the first day of listings, the trades of STE reached 770 francs per share and went on to reach 1,000 a few weeks later. Though visits remained below expectations, the revenues gathered during the World Exposition generated a profit of 5.6 million francs, redeemable ordinary shares were fully repaid and 500,000 francs were distributed in dividends to the shareholders. It turned out to be a very lucrative deal.

Epilogue

The tower's revenues after the World Exposition remained below expectations, but in 1910 Eiffel obtained an extension of the concession for another 70 years. As the tourism grew in twentieth century, the tower soon became a focal point of the visitors to Paris. STE developed into a profitable business and in 1980, when the concession was renewed, there were new bidders.

From then on, the operation of the tower was transferred to a new company, "Société Nouvelle d'Exploitation de la Tour Eiffel", 30% of which was owned by the City of Paris and the remaining 70% by the holding company, 40% of which were controlled by the City of Paris and 60% by the financial partner. Since 2006, the concessionaire of the Eiffel Tower has been the "Société d'Exploitation de la Tour Eiffel", a subsidiary of the City of Paris and private partners, like LVMH. In 2015, the shares held by the private partners were transmitted to the public entities. The tower is run today as a fully independent business. It benefits from no subsidiary and attracts more than 6 million paying visitors each year, making it one of the most profitable monuments in the world.