



LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

**MASTER
FINANCE**

MASTER'S FINAL WORK
PROJECT WORK

DEVELOPMENT OF FINANCIAL MEDIA TO PROVIDE FINANCIAL
SERVICES TO THE CHINESE COMMUNITY ACROSS EUROPE

HUANG JINGYANG

OCTOBER - 2016



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SUPERVISOR:

CLARA PATRICIA COSTA RAPOSO

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Acknowledgements

I would like to express profound gratitude to my supervisor Prof. Clara Raposo for her patience, encouragement and useful suggestions throughout this project work.

In addition I thank the members of our team for their commitment and contribution to the project.

Finally, and most importantly, I would like to give special thanks to my mother for her full supports.

Abstract

In the past few years, WeChat official account has been widely accepted as a new means of receiving news and information by Chinese both at home and abroad. Many startups also use this platform to provide various services to their users and achieve great success. Since there are more than two million Chinese citizens in Europe, and their presence in the European financial market is limited, it is a great opportunity to develop a financial platform based on WeChat and other social media to provide financial news, information and services to the Chinese community across Europe.

In order to know whether it is worth investing in this project, the most widely accepted financial technique, NPV of the project with discounted free cash flows, will be used. If NPV of the project is positive, the project can be accepted. Otherwise, the project should be rejected. A business valuation based on the DCF method is, therefore, performed to assess the theoretical value of the project.

Keywords: Project Valuation, NPV, DCF Method, WeChat Official Account, Chinese Community across Europe

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Glossary

APV - Adjusted Present Value

β_U - Unlevered Beta

β_L - Levered Beta

CAPEX - Capital Expenditure

CAPM - Capital Asset Pricing Model

D - Market Value of Debt

DCF - Discounted Free Cash Flow Method

D/E - Debt to Equity Ratio

D / (E+D) - Weight of Debt in Capital Structure

E - Market Value of Equity

E / (E+D) - Weight of Equity in Capital Structure

EBIT - Earnings before Interest and Tax

ECB - European Central Bank

EV - Enterprise Value

FCF - Free Cash Flow

FCFE - Free Cash Flow to the Equity

FCFF - Free Cash Flow to the Firm

G - Perpetuity Growth Rate

GDP - Gross Domestic Product

NPV - Net Present Value

NWC - Net Working Capital

PV - Present Value

R - Discount Rate

R_D - Cost of Debt

R_E - Cost of Equity

R_f - Risk-free Rate

T - Cash Flow Period

T_c - Corporate Tax

TV - Terminal Value

WACC - Weighted Average Cost of Capital

1 - Introduction

This project analyses the feasibility of developing financial media based on WeChat official account and other social media to serve the Chinese community across Europe. Currently, the project is implemented by a team of five students in Portugal, of which I am a member. The name of the WeChat official account we created is “大西洋微金融” (ID: WeFinancer).

The presence of Chinese migrants in Europe dates back to two hundred years ago. In the early days, they came as seamen by dozens, settling down in some port cities and establishing small Chinatowns (Benton, 2011). After several waves of migration under different historical backgrounds, the Chinese communities became widespread across Europe. The number of Chinese in Europe also evolved from hundreds to tens of thousands, and finally grows to more than two million (Latham & Wu, 2013). In terms of economic activities, although Chinese communities in different parts of the Europe present different characteristics, the catering niches and trade still predominate in Chinese communities. But attention should be paid to the emerging economic models. In some European countries, their economic activities have been transforming from traditional business to mainstream ones, such as manufacture, real estate, banking and insurance sector, etc.

However, the European financial market is still an area with limited presence of Chinese citizens in Europe. Our team did some survey and found out two reasons for this phenomenon. First, the booming of Chinese economy in the last decade, especially in the real estate sector and stock market, has encouraged many Chinese citizens in Europe to put money in the Chinese market. Second, very few knowledge they possess about the European financial market prevents them from going further into this area. Another thing we found is that many Chinese citizens in Europe are curious about the European financial market, as they witness the sharp ups and downs of Chinese stock market and the most recent financial crisis in 2008. But due to the language barrier and lack of knowledge of European financial market, they just stay far away from things they are unfamiliar with.

Therefore, it is necessary to build a bridge between the European financial market and Chinese community across Europe. Here comes the role of Chinese messaging app - WeChat. WeChat for Chinese is just like Facebook for westerners, but with many more features. Among them, the WeChat official account stands out, as it can be used by governments, media companies, banks and startups to provide news, information and other services. Hence, it is a great opportunity for us to build a financial platform based on WeChat official account to provide

financial news and introduce financial products and services to Chinese community across Europe.

The main body of the paper starts from the literature review of project valuation in section 2. Then, sections 3 and 4 introduce the WeChat official account and evolution of Chinese community in Europe, explaining why WeChat official account is the best tool for a startup to serve the Chinese communities. Section 5 conducts a SWOT analysis of the project. From section 6 to section 8, the marketing strategy, risks and operation of the project are analyzed. Finally, in section 9, the NPV and enterprise value of the project is computed to assess if it is worth investing in this project.

2- Literature Review

2.1 - Investment Decision Rules

Remer and Nieto (1995) have categorized 25 project evaluation techniques into 5 types: net present value methods (NPV), rate of return methods, ratio methods, payback methods and accounting methods. Among them, NPV technique is considered by many researchers to be the most popular and sophisticated approach for investment decision making (e.g. Žižlavský, 2014). NPV of a project or investment is the “difference between the present value of its benefits and the present value of its costs” (Berk & DeMarzo, 2013).

$$NPV = PV (\text{Benefits}) - PV (\text{Costs})$$

Generally speaking, NPV is a very straightforward way to value a project. The investor can “accept the project if its NPV is positive” (Berk & DeMarzo, 2013). The following is the formula for calculating NPV (Brealey, Myers, & Allen, 1998):

$$(1) \quad NPV = FCF_0 + \sum_{t=1}^T \frac{FCF_t}{(1+r)^t}$$

Where:

FCF₀ - Initial Investment (usually negative)

FCF_t - Free Cash Flow in Period t

r - Discount Rate. r is determined by expected rate of return on the investment. If the project is funded through both equity and debt, then the WACC shall be used to discount the cash flows.

t - Cash Flow Period

2.2 - Business Valuation

Business valuation is the core of modern corporate finance. The valuation process shall be conducted whenever a company wants to invest in a project, make an acquisition, or “identify sources of economic value creation and destruction within the company” (Fernandez, 2015). But there is no one way to determine what a business is worth. The value of a company “is different for different buyers and it may also be different for the buyer and the seller” (Fernandez, 2015). Hence, the valuation results may differ quite a lot depending on who determines the business value. Also, the valuation process is subject to assumptions, and even slight changes in the assumptions would alter significantly the results (Steiger, 2008). Therefore, the sensitivity analysis shall be performed to estimate the effects of different variables on the investment returns.

2.2.1 - Valuation Methods

There are literally thousands of methods and theories on company valuation, and their classifications differ from researcher to researcher. According to Fernandez (2015), there are six main valuation methods: balance sheet-based methods, income-statement based methods, mixed methods, cash flow discounting-based methods, value creation methods and options methods. Based on Damodaran (2006), there are four approaches to valuation: discounted cash flow valuation, liquidation and accounting valuation, relative valuation and contingent claim valuation. In practice, many valuation methods are widely used, but the only methods that are conceptually “correct” are based on cash flow discounting (Fernandez, 2015). These methods view the company as a cash flow generator and, therefore, assessable as a financial asset. This concept also applies to the project. Hence, we will use the cash flow discounting-based methods to value our business.

2.2.2 - Discounted Cash Flows

Discounted cash flow is the fundamental tool to value a business. Since the company can be viewed as a cash generator, we can discount the company’s expected future free cash flows with the cost of investment to obtain its present value. According to Damodaran (2002) and Fernandez (2002), there are three most commonly used methods, namely, Free Cash Flow to the Firm (FCFF) using the weighted average cost of capital (WACC), Free Cash Flow to the Equity (FCFE) using the cost of equity as discount rate, and Adjusted Present Value (APV).

➤ FCFF

FCFF is the free cash flow generated for a firm after expenses, taxes and changes in net working capital and investments are met. It is considered to be a good representation of a firm’s operations and performance. According to Damodaran (2006), one of the biggest strengths of FCFF method is the “ease with which changes in the financing mix can be built into the valuation through the discount rate rather than through the cash flows”. In sum, the FCFF is computed as if there is no debt financing, and the existence of debt is taken into account by adjusting the discount rate (WACC). In this WACC rate, the tax benefit associated with interest payment is considered. This is described in more detail in the next section.

➤ FCFE

FCFE is the free cash flow available to equity holders after taking into account all payments to and from debt holders (Berk & DeMarzo, 2013). The formula for calculating the FCFE is shown below (Damodaran, 2006):

$$(2) \quad \text{FCFE} = \text{Net Income} + \text{Depreciation} - \text{Capital Expenditures} - \text{Change in non-cash Working Capital} - (\text{New Debt Issued} - \text{Debt repayments})$$

Under this method, the equity cost of capital should be applied to discount the free cash flows.

➤ APV

According to Damodaran (2002), the APV method is to value the firm by steps, beginning by valuing the firm under the assumption that it was financed only with equity. In this first step, the FCFE are discounted at an unlevered cost of equity. Then, the effects on value of the existence of debt and other non-equity claims will be added. This method is considered to be very effective when there are tax shields resulting from one or more tax deductions of interest payments.

Although the three approaches use different definitions of cash flows and discount rates, they “always give the same value; they differ only in the cash flows taken as the starting point for the valuation” (Fernandez, 2002).

2.2.3 - FCFE Method

As we mentioned above, FCFE is a free cash flow available to all the investors of a firm, including equity holders and debt holders, after the expenses and reinvestment needs are met. The definition of the FCFE is shown below (Berk & DeMarzo, 2013):

$$(3) \quad \text{FCFE} = \text{EBIT} \cdot (1-t) + \text{Depreciation} - \text{CapEx} - \Delta \text{NWC}$$

Where:

EBIT - Earnings before interest and tax. EBIT can be obtained from the firm's income statement or computed from the cash flow statement.

CapEx - Capital expenditure. CapEx are funds used by a firm to acquire physical assets such as property, industrial buildings or equipment, in order to materialize new investments by the firm.

NWC - Net Working Capital. NWC is the difference between current assets and current liabilities. NWC is capital used to fund operations in the short run and can be computed based on a firm's balance sheet.

2.2.3.1 - Weighted Average Cost of Capital (WACC)

After forecasting the future free cash flows, it is necessary to find out the appropriate discount rate to compute its present value. Under the FCF method, the WACC shall be applied. WACC is the "average cost of capital the firm must pay to all of its investors, both debt and equity holders" (Berk & DeMarzo, 2013). However, we should keep in mind that WACC is not a single cost, but a weighted average of a cost and a required return (Fernandez, 2011). The following is the formula for calculating WACC (Berk & DeMarzo, 2013)

$$(4) \quad r_{wacc} = \frac{E}{E+D} * r_E + \frac{D}{E+D} * r_D * (1 - T_c)$$

Where,

E - Market value of equity. Market value of equity is calculated by multiplying the company's current stock price by its number of outstanding shares.

D - Market value of debt. Because the market value of debt is generally not very different from its book value (Berk & DeMarzo, 2013), it can be substituted by the book value in practice. The book value of debt can be found on the firm's Balance Sheet.

r_E - Required return on equity. In most cases in practice, CAPM is used to compute the required return on equity.

r_D - Required return on debt. According to Damodaran (2002), the required return on debt is determined by the risk-free rate and a premium for the default risk of the company. The tax advantage associated with debt is considered also in $r_D * (1 - T_c)$, where T_c is the corporate tax rate. As the default risk increases, the cost of debt will also increase. Still, the tax benefit increases as the tax rate increases. The required return on equity also increases with debt (Modigliani and Miller, 1958).

Many times in forecast, we assume a firm has a target capital structure $\frac{D}{E+D}$ and use this as the weight for the WACC.

2.2.3.2 - CAPM

The CAPM was first developed by Sharpe (1964) and by Lintner (1965) independently. It provides an intuitive insight into the relation between risk and return (DeMarzo, 2012). After several decades, the CAPM is still widely used in applications, being the main tool used by most major firms to calculate the cost of equity. However, EF Fama (2003) argued that the empirical record is poor. The CAPM estimates of the cost of equity for high beta stocks are too high and estimates for low beta stocks are too low (Friend and Blume, 1970). But in our work,

we still use the CAPM to estimate the cost of capital, as it is the most widely used throughout the world. Based on DeMarzo (2012) and Damodaran (2002), the formula for CAPM is as follows:

$$(5) \quad E[R_i] = r_f + \beta_i(E[R_{Mkt}] - r_f)$$

Where:

$E[R_i]$ - Expected Return on Asset i

r_f - Risk-free Rate

$E[R_{Mkt}]$ - Expected Return on Market Portfolio

β_i - Beta of Asset i

2.2.3.3 - Terminal Value (TV)

Because the life of the project is indefinite, it is more reasonable to forecast free cash flows over the explicit horizon other than the full horizon of the project. In this case, the terminal value of the project should be included in the calculation. The terminal value is the present value of the remaining free cash flows beyond the explicit forecast horizon (Berk & DeMarzo, 2013), and will be estimated under the assumption that the firm will grow in a perpetuity growth rate g . In our valuation, we assume the perpetuity growth rate to be 2%, the target inflation rate of the ECB. The terminal value can be calculated as follows:

$$(6) \quad TV_{2026} = \frac{FCF_n \cdot (1+g)}{WACC-g}$$

2.2.3.4 - Enterprise Value (EV)

Given the FCFFs, discount rate WACC and TV, the enterprise value (EV) can be computed based on the following formula:

$$(7) \quad EV = \sum_{i=1}^n \frac{FCFF_i}{(1+WACC)^i} + \frac{TV}{(1+WACC)^n}$$

3 - WeChat Official Account

3.1 - WeChat and Its Global Reach

WeChat is a mobile text and voice messaging communications service developed by Tencent in China. It was launched in January 2011 and becomes the largest messaging app by monthly active users within five years in China. According to the Tencent Quarter Report, WeChat had 846 million monthly active users as of September 2016. The statistics revealed by DMR WeChat Report (November 2016) show that WeChat had 1.1 billion created accounts in January 2015, and had 70 million users outside of China in April 2016. Still, the market research report of WeChat official account by iiMedia Research¹ shows that the number of WeChat official accounts reached 12 million in 2016.

At first sight, WeChat is similar to many other messaging apps, such as Whatsapp, LINE and Facebook Messenger. Indeed, they all have the service of text and voice messaging, video chat, stickers and sharing of photos, among other facilities. However, WeChat has some unique and innovative features which make other messaging platforms seem rather primitive in comparison.

WeChat has the ambition to be the portal to the mobile world. It is designed to meet most of the users' needs in their daily life, from shopping, calling a taxi, managing credit card bills to receiving the news, and much more. It is this app-within-an-app functionality that has led WeChat to achieve tremendous success.

3.2 - How the WeChat Official Account Works

Presently, WeChat has more than twelve million third-party apps, known as "official account". Nearly all the organizations and individuals, including media companies, banks, celebrities and startups, can have an official account on WeChat.

There are two types of official accounts: a service account and a subscription account. The subscription account is the best choice to broadcast daily news and information, which is also the choice for our financial platform. Generally speaking, it enables you to push feeds once a day to subscribers, interact with them and provide them with service. For instance, the subscription account of Financial Times. As long as the users follow their accounts, they can receive information from FT once a day in their mobile devices.

¹iiMedia Research is a global leading mobile internet organization focusing on third party data mining.

Figure 1: Display of the Official Account of Financial Times in WeChat



Source: Author

Among Chinese community in Europe, WeChat official account is also widely accepted and becomes the most common way to receive daily news and information. In Portugal, a country which has just 21,329 Chinese residents (SEF, 2015), there are four Chinese media providing daily news service to Chinese community. All the four media have their own websites and WeChat official accounts. However, most of the Chinese residents in Portugal read the news through WeChat platform instead of the website.

3.3 - Feeding Our Official Account “WeFinancer”

3.3.1 - Target client

Our account “WeFinancer” targets mainly Chinese community in Europe. Here, we divide Chinese citizens into three groups according to their characteristics: 1) the Chinese citizens who have been living in Europe for a long time; 2) the Chinese investors who come to Europe through the project Golden Visa; 3) the Chinese students in the European higher education systems. Clearly, Chinese tourists are excluding from our service.

3.3.2 - Contents that interest the target client

According to the definition by Kennedy (2016), social media refers to various platforms that are available on the Internet, which provide users the chance to create their profiles and share and promote contents. So, to run the social media, the production of contents is the most important job to do, and the quality of the contents plays a critical role in its success.

As to our WeChat official account, since each push is allowed no more than eight feeds, the contents must be very carefully selected. Basically speaking, the financial and business news are essential in every push. But other topics shall be also covered in order to meet the various needs of the target clients, such as international breaking news, useful information, buzzes in European countries, etc. For instance, the Golden Visa holders who live in Portugal have no knowledge about the banking system. They have no idea of how to use the Multibanco² and to make a transfer through mobile applications. They do not know which type of credit card suits them. For them, their urgent needs are to put their daily financial life in order, rather than enter the financial market. As for the Chinese citizens who have been living in Europe for quite a time, they are keen to know European breaking news and business news (e.g. Brexit topic). And one interesting thing is that the students in the European higher education system show great interest in how to trade stocks and bonds, which could possibly be the result of their education received, particularly in the field of economics and finance. For them, this new financial information service can be helpful for stock recommendations.

3.4 - Transmission Mechanism

Due to WeChat's large user base at home and abroad, the contents from its official accounts can quickly spread around the world. Similar to Facebook, its transmission mechanism also demonstrates the exponential growth via sharing on Moments.

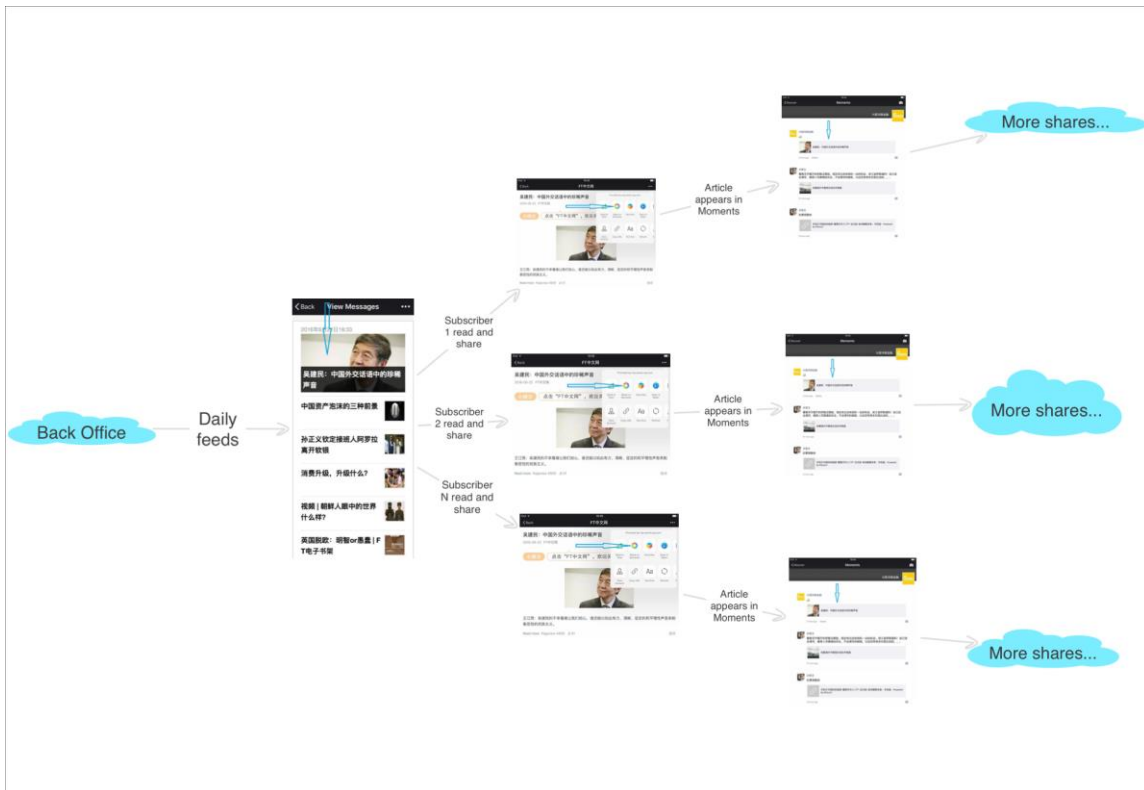
According to a news report by Yangcheng Evening News³, the most viewed article pushed by WeChat official account in 2015 has a total of 36.9 million views, and all the top 10 articles have more than 20 million views. Still, the top 500 official accounts pushed around 1.15 million articles in 2015 and obtained 104.9 billion views. Each article from top 500 official accounts has, on average, 910,000 thousands views.

To take full advantage of the transmission mechanism, one simple and useful method is to have as many friends as possible in the friend list. Currently, each WeChat individual account allows up to 5,000 friends. Suppose that our team has two individual WeChat accounts with each one having 5,000 friends; then initial two shares on Moments can have the article exposed to 10,000 potential readers.

²Multibanco is an interbank network in Portugal owned and operated by SIBS, that links the ATMs of 27 banks in Portugal

³Yangcheng Evening News is the Chinese newspaper 《羊城晚报》

Figure 2: Transmission Mechanism of WeChat



Source: Author

3.5 - Pros and Cons

Without doubt, WeChat is the most influential social media in China, thanks to its billion user base, penetration in almost all the operating systems, way of broadcasting news and effective transmission mechanism.

According to the Kantar China Social Media Impact Report 2015, WeChat’s device penetration was much higher than its main competitors, namely Weibo and BBS, with 74.8% of the mobile phones installed with WeChat, 18.4% for Weibo and 8.9% for BBS.

However, WeChat official account is far from being perfect. The biggest disadvantage is that each push allows no more than eight feeds, being too “mean” when comparing to website or Weibo, where news can be updated at any time. It is more similar to the paper media: once in a day with limited space.

The other main disadvantage of subscription account is the way the messages are displayed: they will be grouped into one folder containing all the subscription accounts instead of being pushed to the session list, and no notification will be sent upon receiving the update from your account.

4 - Chinese community in Europe

4.1 - Brief History

Chinese have been living in Europe since 1800s (Benton, 2008). They brought their own cultures, languages and goods of Dynasty Qing to Europe and, from the start of the Republican period after the Xinhai Revolution of 1911-12, were active across Europe.

Benton (2010) studied five waves of Chinese immigration into Europe under different backgrounds. The first Chinese to settle in Europe were sailors. They established small Chinatown in port cities, such as Liverpool, Hamburg, Marseille, Amsterdam, etc. Most of them were Cantonese. Their principal economic activities were catering and laundering, which were jobs they had done during their sea life. The second group walked from China into Western Europe through the Trans-Siberian Railway, or came by sea. Most were from two places, namely, Qingtian in Zhejiang and Tianmen in Hubei. In the case of Portugal, the Qingtianese also have been consistently playing an important role in the formation and development of the Chinese community in Portugal. The third group came during World War I. They were hired by Allies to open trenches in France, Belgium, and Russia. Thousands stayed after the war, but most settled down in France. They started to work in factories, being the only Chinese in Europe to have done so. The fourth wave of immigration came from the European colonies in the 20th century: British colonies like Malaya and Guyana; French colonies like Vietnam and Mauritius; and Portuguese colonies like Timor and Mozambique. Most of them knew English, French, Portuguese, or Dutch. They were educated, relatively wealthy, and resourceful. The fifth, also the last, were peasants from Hong Kong's New Territories. As Commonwealth citizens, they were free up until the 1970s to settle in Britain, where they entered the restaurant niche and competed successfully with the already settled Chinese. When the restaurant sector in Britain became mature, some moved to the European continent.

Table 1: Global Growth Distribution of the Overseas Chinese Population since 1980 (million)

Region	1980		2000		2007	
	Population	Per cent	Population	Per cent	Population	Per cent
Asia	24.764	91.81	32.942	82.85	35.48	78.1
America	1.333	4.94	4.333	10.9	6.3	13.87
Europe	0.622	2.31	1.454	3.66	2.15	4.73
Pacific	0.176	0.65	0.786	1.98	0.95	2.09
Africa	0.077	0.29	0.244	0.61	0.55	1.21
Total	26.972	100	39.76	100	45.43	100

Source: Latham & Wu (2013)

4.2 - Chinese Community in Portugal

Since China's Economic Reform in 1978, more and more Chinese have been going abroad to do business, study or make a living. In the 1980s, many Chinese went to southern Europe through their ties with the old communities, especially Chinese from Wenzhou and Qingtian in Zhejiang. Their destinations mainly were Spain, Portugal and Italy. There have been small Chinese communities in these countries for a hundred years, but today's communities are much stronger. It is estimated that there are around 170,000 Chinese residents in Spain and 330,000 in Italy (Latham & Wu, 2013). And the data of SEF show that the number of Chinese residents in Portugal was 21,329 in 2015.

The Chinese community in Portugal also started to grow bigger and stronger in the 1980s with the arrival of Wenzhounese and Qingtianese. Initially, most of them made a living by working in the Chinese restaurants or doing street selling. As they learned how to run a restaurant and saved enough money, they started their own businesses. The number of Chinese restaurants soared from several dozens in 1990s to more than 600 in 2000s, which reflected the development of the Chinese community in Portugal.

Other new economic activities emerged in recent years as the economic exchanges between Portugal and China got deeper. Chinese capital has been flooding into Portuguese mainstream economy, such as in the energy company, in the banking and insurance system, in real estate, etc. And based on the data revealed by SEF, the program Golden Visa launched by Portugal has attracted 2,973 Chinese investors from October 2012 to November 2016.

4.3 - Presence in the European Financial Market

Few documents could be found about the presence of the Chinese community in the European financial market. But fortunately, my working experience in the Chinese media Portal Martim Moniz in Portugal allowed me to get to know different Chinese with different backgrounds. Among them, some have lived in Portugal for more than 40 years with their children growing up in Portugal; some moved to Portugal via the Golden Visa project; and many young people who came to Portugal around the age of ten and received college education in Portugal. Through conversations with hundreds of them, a general conclusion could be reached about the presence of Chinese community in the European financial market.

The director of the oldest Chinese media in Portugal, Mr. Chen, once told us that most of the Chinese in Portugal knew little about the European stocks and bonds, and they had a negative feeling about the financial market, due to the impact of the financial crisis in recent years on their business. Mr. Chen has lived in Portugal for more than a decade, and knows more than

half of the Chinese in Portugal. Another talk with one Chinese lawyer in Portugal also confirmed Mr. Chen's idea. She said that the already settled Chinese were busy doing their traditional business, which was much more practical and interesting than the mysterious financial market.

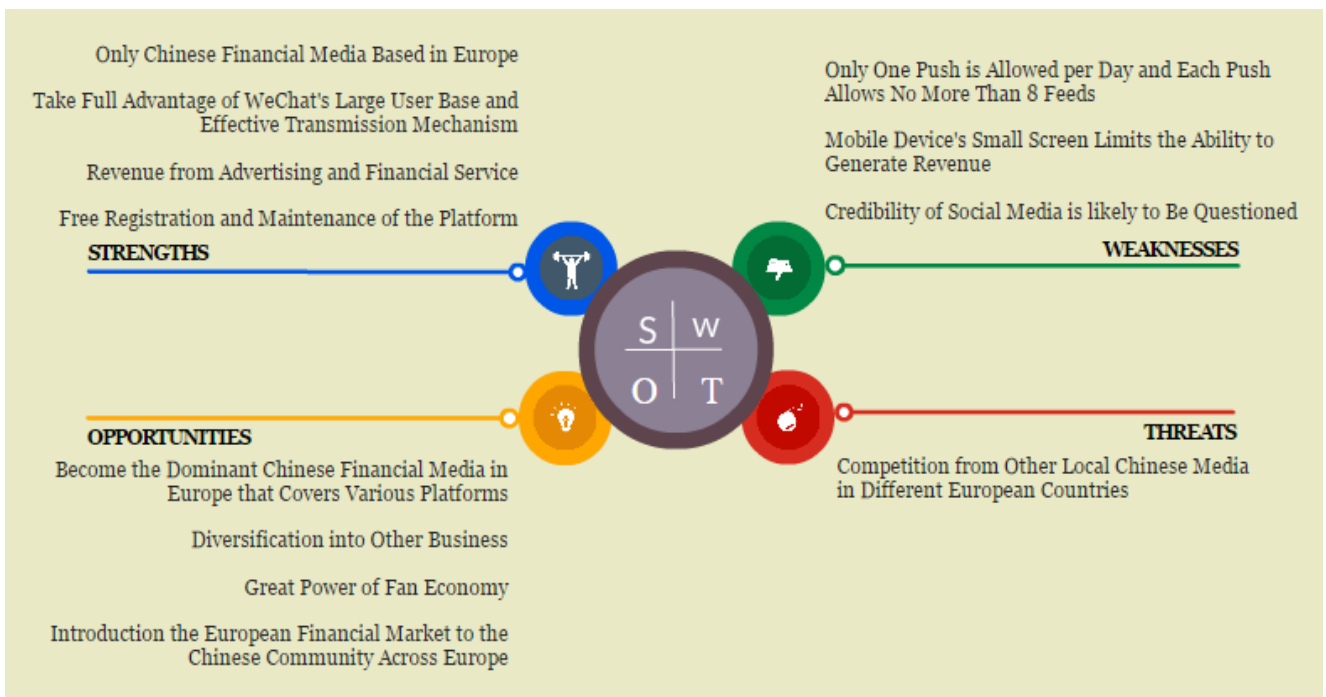
But the feedback from the students in the European higher education system is totally different. Many of them are studying economics and finance in Europe. They show great interest in the financial market, and actually some of them have an account in the investment bank.

Therefore, we can reach a general conclusion that the European financial market is still a field with weak presence of Chinese. However, the situation can be improved if they are exposed to more knowledge about the financial market.

5 - SWOT Analysis

There are various frameworks used in the analysis of a project's strategic position, and one of the most straightforward is the SWOT analysis (Hill and Westbrook, 1997). SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is proposed by many as an analytical tool to categorize significant environmental factors both internal (Strengths and Weaknesses) and external (Opportunities and Threats) to the organization (Pickton and Wright, 1998). Therefore, we also apply this framework to analyze the project's strategic position (See Figure 3 below).

Figure 3: SWOT Analysis of the Financial Platform "WeFinancer"



Source: Author

➤ Strengths

As the first professional Chinese financial media based in Europe, the platform enjoys the first-mover advantage. Although there are several mainstream financial media in mainland China which also include European news, they generally cover the major events, which means they are of little use to the Chinese community when it comes to the daily finance.

In comparison with other local Chinese media in different European countries, which provide mainly daily local news, this platform is much more international and specialized. Existing media also push financial news and information, but in an unsystematic way. It is reasonable that most of us tend to go to the professional website when we are seeking for some financial news and information.

The other advantage of this platform comes from the WeChat's billion user base and effective transmission mechanism. For some successful official accounts, it is quite normal that their articles can have more than 100,000 views within hours.

Finally, for the startups, it is totally free to register and maintain an official account, which is a big advantage over other platforms such as website and apps. The back office is also very easy to use and boasts some amazing features, for instance, multimedia.

➤ **Weaknesses**

As it is mentioned above, the biggest disadvantage of the official account is that it can be updated only once a day with no more than 8 feeds. And the way it displays the history makes it difficult for readers to search and locate the information they want.

Because WeChat is principally designed for mobile devices, most of its users read news through mobile phones other than PCs. This would undermine the user's reading experience due to their small screens. At the same time, the small screen and limited quantity of news means its ability to generate revenue from advertisement will be restricted.

Besides, the credibility of the contents of official accounts will also be questioned as nearly any individual can obtain an account. In order to stand out from competition, some accounts will push false news or spread rumors attention. Of course, Tencent has relevant policy to punish those who push inappropriate contents, but with millions of articles created each day, it is inevitable that the credibility of contents will be suffered.

➤ **Opportunities**

This platform is an initiative to build a bridge between the European financial field and the Chinese community across Europe. It has all the possibility to become the dominant Chinese financial media in Europe. We believe that it can obtain tens of thousands of subscribers in several months in the condition that the platform delivers excellent contents consistently and a proper marketing strategy is implemented. After the WeChat official account achieves success, we can start to create its website version and develop its own app to deliver a much more complete service to the Chinese community. The success of the platform will open up many opportunities.

As an international platform, it would be a favorable choice for some companies to get themselves exposed to the Chinese community across Europe, such as airlines and financial institutions. Generally speaking, advertisement is a big source of revenue for media. So is for our WeChat official accounts. In China, there are several websites, figuratively speaking, WeChat official accounts markets that help the official account operators to grow their advertising business, for instance, www.taogonghao.com. Any operator can release the relevant

data of their account in this website, and make an offer to get ads. For example, in the case of “femorning”, an official account that provides financial news with 1.09 million users, sets an offer of €16,000/day for doing ads in its top place. But for many small official accounts, due to the small screen of the mobile devices and limited number of feeds, the ability to generate revenue from the advertisement is greatly restricted. Therefore, many people try to fully explore the potential of the large user base and diversify the sources of revenue.

The official account “collegedaily” we mentioned above is a great success of diversification. It received an investment of €1.35 million and now is preparing to start a consulting business for students who want to study abroad. Moreover, “yu-mao-qiu”, a platform which specializes in badminton with 460,000 users, achieves great success by building their own badminton brand and selling badminton equipment.

Therefore, these practices can also be used in our platform. In addition to the advertisement, we can establish our partnership with the banking and insurance companies in Europe to sell their financial products and provide financial advisory service to the Chinese community.

➤ **Threats**

Without doubt, the new media will face enormous challenges from other old and experienced media, for instance, oushinet.com, the largest Chinese media in Europe. oushinet.com also covers the whole Europe and has its newspaper, website, WeChat official account and Weibo.

6 – Risk Analysis

This financial platform “WeFinancer” aims to introduce European financial market to Chinese community, so that they can get themselves financially secured through investment in financial products, such as bonds, stocks, investment funds, insurance products. However, as most of the Chinese immigrants in Europe have little knowledge of the market, our work will be very challenging, and there exist several key risks that would undermine the future of the platform.

6.1 - Potential Entrants

Even though the project enjoys the first mover advantage, our idea could be copied quickly by any other company or individual, since the opening of a similar WeChat official account is so easy. In this case, our biggest threat would be from the old local Chinese media in different European countries, as they can have rich local resources.

Therefore, it is necessary for us to include local elements in our project, by seeking some partnership with local media, or recruiting some local editors.

6.2 - Political Risk

The political risk comes from the fact that the official account is registered in mainland China and should abide by Chinese laws. Under its censorship mechanism, the contents of the platform shouldn't touch upon sensitive words or historical events. Or else, the platform will be at risk of being closed. The most recent case is “collegedaily”, a platform that targets students who study abroad, because its attempts to commemorate the Tiananmen Square protests of 1989. The account was closed for a month, but finally managed to get back. Interestingly, the number of subscribers increased by 8,000 during the crisis. It was reported by 36kr.com that this platform, which started to operate in 2014, received an investment of around €1.35 million in February, 2016.

6.3 - Emergence of New Forms of Media

Technologies have greatly affected the media industry. In the digital age, we increasingly receive news, information, and entertainment through computers and mobile devices. Print-based media outlets have seen a decline in use and in some cases have disappeared completely. Even in digital media itself, it also undergoes rapid transformation all the time, from the appearance of website to the rise of google, from the old blog to the very social media.

In China, the social media has been growing very fast, and new forms of social media are emerging all the time. Weibo, Chinese version of Twitter, once was the most popular social

network in China. But with the rise of WeChat, Weibo lost its ground dramatically. Currently, WeChat official account is widely accepted by Chinese as a means to receive contents of high quality. However, nobody can say that WeChat can always dominate Chinese social media, as technologies never stop advancing. But when the challenging new media emerges, there is still a way to transfer the user base of WeChat official account to the new battlefield.

7 – Marketing Strategy

The platform not only serves as financial media, but also helps the Chinese immigrants to put their daily financial life in order with the practical advice and information provided. Therefore, we strongly believe that the platform will be well recognized in the Chinese community.

However, the adequate marketing strategy should also be done to increase its influence. Based on the experience from some other very successful WeChat official accounts, the following strategies can be applied to our platform.

7.1 - Partnership with Other Official Accounts

The basic form of cooperation with other official accounts is to share the contents we have. As stated above, there are thousands of financial media in China, dozens of whom have more than one million users. It would be extremely helpful if we can have our contents exposed to their users.

It is known to everybody that all the media are thirsty for contents of high quality. Since our platform locates in Europe and mainly covers European financial news, we have the advantage of going deeper into the events happening around, which makes our contents unique and exclusive. Therefore, by sharing our contents with the large WeChat financial media, we could expand our user base very effectively. Through the transmission mechanism of WeChat, it would indirectly reach the Chinese in European countries. To test this idea, our team once sent an email to one of the top 10 WeChat financial media in China and expressed our will of sharing the contents, and their reply was very positive, saying that the contents with high quality were welcome in their platform.

Table 2: Top 10 Financial WeChat Official Accounts in China

	ID	User Base (Million)	Average views of the top news
1	wuxiaobopd	1.4	98,248
2	zhanhao668	1.32	100,001
3	cnfol-com	1.15	91,175
4	zsyd88	1.12	57,656
5	Femorning	1.09	99,456
6	fengyuhuangs	1.02	100,001
7	zsnc-ok	1.0	81,550

	ID	User Base (Million)	Average views of the top news
8	jinrongbaguanv	1.0	74,588
9	zhengshancanyue	1.0	100,001
10	cfoclass	0.98	41,015

Source: taogonghao.com

On the other hand, it is more important for us to reach directly the Chinese community across Europe. Therefore, instead of seeking partnership in China, we should try our best to establish the cooperation with Chinese media based in European countries. In this case, we can share with them our in-depth and exclusive news of the European financial world.

7.2 - Organization of Relevant Events

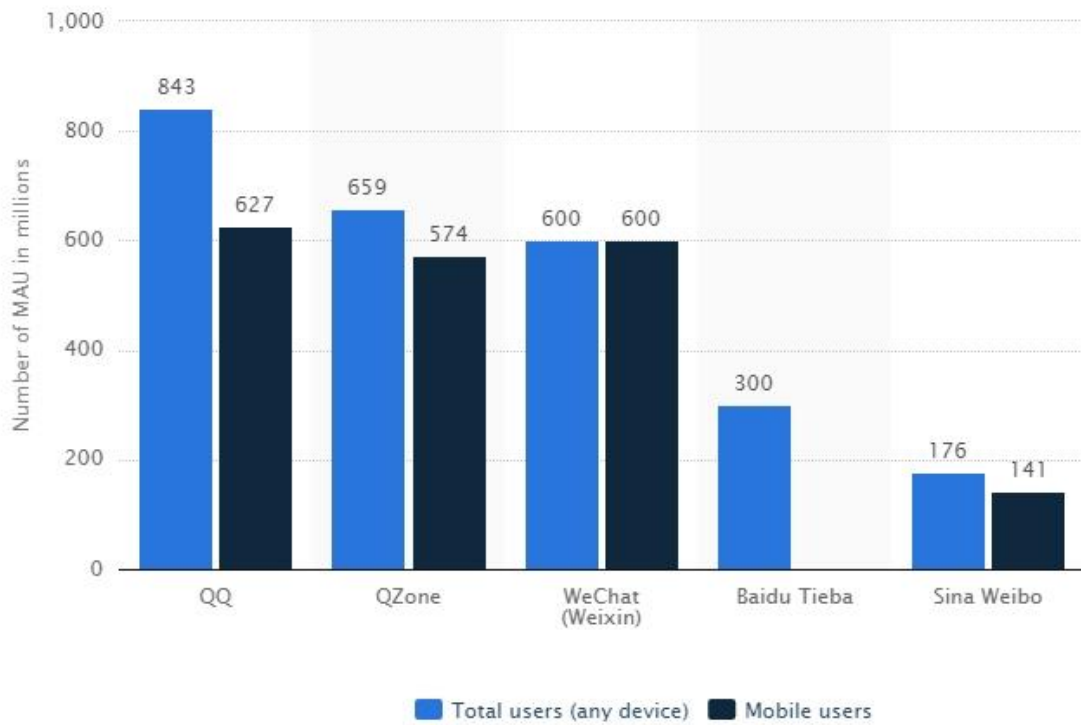
As mentioned before, the Chinese community stays far away from the European financial market partly because they possess little knowledge of the market. Therefore, we can organize some events in various forms to introduce them to the basic knowledge of a financial market. For example, for those who are interested in trading securities, we can open some free classes to teach them the basic concepts in the financial field. For those who came to Portugal via the Golden Visa program, we can arrange some salon to help them to resolve the problems they meet when dealing with the banks, such as how to open a bank account, how to use Multibanco, or how to find the right credit cards for them.

Organization of events would be the most direct way to interact with the clients, and it allows them to have a better and deeper understanding of our platform. Without doubt, most of the people who participate in the event will follow our WeChat platform.

7.3 - Other Social Media

Social media has many forms, including blogs, business networks, forums, social networks, microblogs, photo sharing, video sharing, etc. Presently, the leading social networks based on number of active accounts in China as of August 2015 are QQ, QZone, WeChat, Baidu Tieba and Sina Weibo.

Figure 4: Leading Social Networking Sites in China as of August 2015 (Based on monthly active users, in millions)



Source: statista.com

Social media is so powerful that the contents created in the platforms can reach out to millions of people worldwide in the blink of an eye with extremely low cost. Nowadays, every company, organization and individual is now using it as a marketing tool to increase their customer base. So, we shall also take full advantage of social media. The Chinese community across Europe uses not only Chinese social networks, such as Weibo, QQ, Baidu Tieba and Douban, but also Western ones, like Facebook and Twitter.

To take one example, Sina Weibo is a microblogging service and commonly referred to as “Chinese Twitter”. According to the DMR Weibo Statistic Report (December 2016), the number of Weibo monthly active users reached 297 million as of November, 2016. With this enormous user base, Weibo is largely used by the WeChat official account operator as the marketing tool. What needs to be done is just copy and paste and put the source of the contents below to lead the readers to follow the WeChat official account. Likewise, Facebook shall also be integrated into our marketing strategy, as many Chinese in Europe, particularly the young people, spend a lot time in Facebook.

8 – Operation and Management

In the beginning, the operation of this digital media is relatively easy in comparison with other media. It consists of mainly two elements: production of the contents and marketing. So, what the project needs is just two teams: one is responsible for feeding the platform, while the other carries out the marketing strategy to expand the user base. The IT team will only be necessary when we start to develop other more complicated platforms.

Figure 5: Structure of Our Team



Source: Author

However, the challenge lies in the management of a multinational team, starting from recruiting local editors and building up an effective team, to finding out a way to pay their wages. All this will take at least six months to work out. For example, the recruitment of the local editor, especially a good one, will not be easy. The best candidate for this job will be the students who take master in the areas of economics, finance, MBA, etc. in European countries, as they possess relevant knowledge and have time to write articles. We already talked to dozens of them to join this project, and most of them showed great interest in the beginning, but they failed to keep on as this is time-consuming and full of uncertainties. Therefore, we should try our best to build a stable team by offering them attractive remunerations.

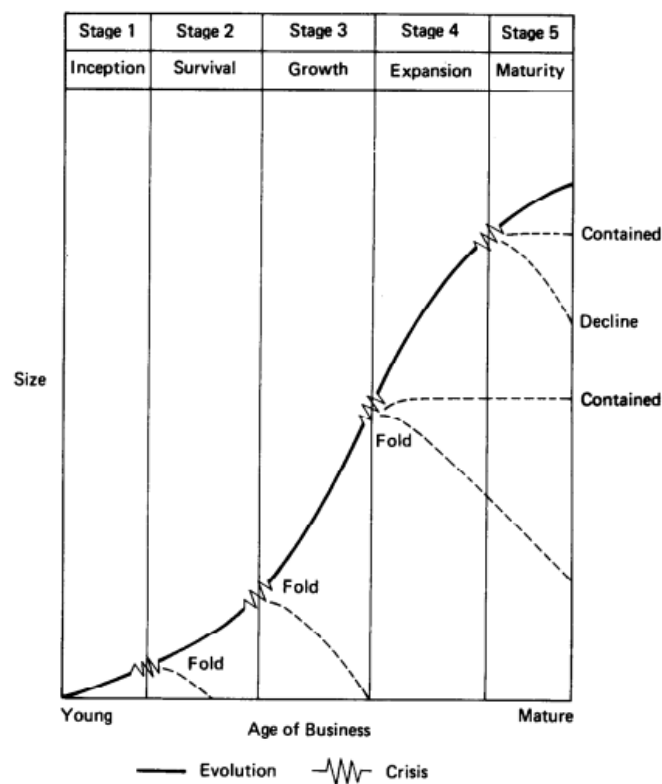
9 - Business Valuation

As we stated in the literature review, the process of business valuation consists of several steps. The first step is to forecast future free cash flows for the next five to ten years. Afterwards, the WACC should be determined to discount the future cash flows. Then, the terminal value should be computed. Finally, based on the relevant formulas, we could find out the theoretical enterprise value. Because the results are subject to assumptions, it is necessary to conduct a sensitivity analysis for the best and worst scenarios of the business.

9.1 - Forecasting FCFs

According to Scott & Bruce (1987), there are basically five stages of growth in small business, and free cash flow in each stage differs quite a lot.

Figure 6: Five Stages of Growth in Small Business



Source: Scott & Bruce (1987)

In the inception stage, we would mainly focus on expanding the influence of the platform, so we do not expect large revenues. In the survival stage, we will start to put a lot of effort into generating revenues from advertisement. Then, in the latter stages, as the project grows bigger

9.1.1 - Estimate of Sales Revenue

The estimate of sales revenue could be very challenging, as there is no such platform in Europe. What we can do is to refer to the data of peer platforms in China. Here, we would like to take a financial platform ID: jinrongbagueanv as an example.

This platform started from Sina Weibo in 2011, covering financial news, economic analysis, gossip in the financial community, etc. In 2013, it opened an account in WeChat platform and achieved great success in less than three years. Their user base has been growing in an exponential way through production of contents of high quality and proper marketing strategy. By far, this platform has developed into a financial media firm that covers more than two million people through their combinations of digital media, such as WeChat official account, Sina Weibo, website, app, and so on. And in July, 2016, “jinrongbagueanv” received roughly €300,000 from an angel investor. See the table below for the revenues they showed to the angel investor:

Table 3: Revenues of the Financial Official Account “jinrongbagueanv” (thousands of euros)

Year	Advertisement	Financial Products Transaction	Valu-added Service	Total
2013	37.03	0.00	0.00	37.03
2014	120.00	0.00	0.00	120.00
2015	534.78	289.86		824.64
2016	1333.33 (666 completed)	1333.33(400 completed)	26.7(Forecast)	2666.67(1066.67 completed)
2017F	2,666.67	2,000.00	666.67	5,333.34
2018F	5,333.34	2,666.67	2,666.67	10,666.68

Source: Revenue Report of “jinrongbagueanv”

We can see from the table that the revenue increased from €37,030 in 2013 to €1,066,670 in July, 2016, presenting a growth of nearly 2900% in three years. Also, the revenue is expected to grow to €10,666,680 in 2018, which means a growth of 288 times in five years. As to the revenue structure, the income from financial service is soaring and is expected to account for half of the total revenue.

Our platform has the same business model as “jinrongbagueanv”, and we also have the opportunity to achieve great success since we are the first one in Europe. But as success depends on so many factors, it is much more rational for us to make a conservative estimate about the future cash inflows. Hence, we just forecasted that the revenue would increase almost 100 times during a period of ten years. See table below.

Table 4: Revenue Forecast of the Project (in euros)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Advertisement	10,000	30,000	50,000	100,000	200,000	250,000	350,000	450,000	550,000	700,000
Sales of Financial Products	0	5,000	10,000	30,000	50,000	80,000	120,000	160,000	180,000	200,000
Financial Advisory Service	5,000	10,000	20,000	50,000	100,000	200,000	300,000	400,000	500,000	500,000
Others	0	0	5,000	10,000	15,000	30,000	40,000	50,000	60,000	70,000
Total	15,000	45,000	85,000	190,000	365,000	560,000	810,000	1,060,000	1,290,000	1,470,000

Source: Author

9.1.2 - Estimate of Costs

Since this is a digital business, the cost of goods sold can be ignored. The main costs lie in the operating expenses, including office renting, equipment, marketing, payroll, etc. The list below is a rough estimate of the project cost.

Table 5: Estimate of Costs of the Project (in euros)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Office Renting	3,600	3,600	3,600	3,600	6,000	6,000	6,000	6,000	6,000	6,000
Payroll	84,000	84,000	120,000	120,000	144,000	144,000	144,000	144,000	144,000	144,000
Office Supplies	15,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Other	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total	104,600	91,600	127,600	127,600	154,000	154,000	154,000	154,000	154,000	154,000

Source: Author

In the first several years, we can rent a small office somewhere in Lisbon. As the business grows, we can move to a bigger office, and the budget will also increase from €3,600 to €6,000. Also, the necessary office supplies, such as computers, copy machines and desks, shall be bought in the very beginning, but the cost is supposed to decline in the following years. The biggest cost comes from the payroll. In the starting phase of the project, our team would mainly consist of the editors and consultants. Then, as we diversify into other business and cover more platforms, we should include more people from different areas, for instance, IT. We would expect the payroll to increase from €84,000/year to €144,000/year. And other costs, such as water and energy, is estimated to be around €2,000/year.

9.1.3 - Estimate of CapEx and NWC

Capital expenditure are funds used by a company to purchase new property, plant, and equipment (Berk & DeMarzo, 2013). Obviously, it is not necessary for us to consider CapEx at this stage. Therefore, we can assume that the CapEx to be zero throughout the life of the project. As to the net working capital, we also assume it to be constant over time, so the changes in net working capital would be 0.

The forecast of FCFF is shown below.

Table 6: Forecast of FCFF of Project (in euros)

Year		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Incremental Earnings Forecast (€)											
1	Sales revenue	15,000	45,000	85,000	190,000	365,000	560,000	810,000	1,060,000	1,290,000	1,470,000
2	Cost of goods sold	0	0	0	0	0	0	0	0	0	0
3	Gross profit	15,000	45,000	85,000	190,000	365,000	560,000	810,000	1,060,000	1,290,000	1,470,000
4	Operating Expenses	104,600	91,600	127,600	127,600	154,000	154,000	154,000	154,000	154,000	154,000
5	Depreciation	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
6	EBIT	-91,100	-48,100	-44,100	60,900	209,500	404,500	654,500	904,500	1,134,500	1,314,500
7	Income tax at 25%				15,225	52,375	101,125	163,625	226,125	283,625	328,625
8	EBIT*(1-t)	-91,100	-48,100	-44,100	45,675	157,125	303,375	490,875	678,375	850,875	985,875
Free Cash Flow											
9	Plus: Depreciation	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
10	Less: Capital Expenditures	0	0	0	0	0	0	0	0	0	0
11	Less: Increases in NWC	0	0	0	0	0	0	0	0	0	0
12	FCFF	-89,600	-46,600	-42,600	47,175	158,625	304,875	492,375	679,875	852,375	987,375

Source: Author

9.2 - Determination of WACC

First of all, we have to make reasonable assumptions in order to calculate the WACC and further the enterprise value.

Table 7: Assumptions

Unlevered Beta	1.05
Levered Beta	1.25
D/E	25%
Effective Tax Rate	25%
Risk-free Rate	1.98%
Market Risk Premium	7.90%
Cost of Equity	11.83%
Cost of Debt	4.00%
E/E+D	80%
D/E+D	20%
WACC	10.06%
Depreciation Rate	10%
Perpetuity Growth Rate	2%

Source: Author

➤ **Risk-free Rate**

Generally speaking, the government bond yields are used as a proxy for risk-free rates, particularly the Germany government bond when valuing a company in Europe. However, according to Bloomberg, the Germany 10-year bond yield in 26/07/2016 is negative, which is obviously not appropriate. EY argues in a report in 2015 that when government bond yields are volatile and not deemed to be the best proxy for the risk-free rate, the average government bond yield over a period can be used. Hence, in our case, we can use the average daily Germany 10-year bond yields from the last ten years. We obtained the historical data of daily Germany 10-year bond yield from www.investing.com and it gave us the average yield of 1.98%.

➤ **Cost of Debt and D/E Ratio**

The project is expected to be funded both through equity and debt, as debt can relieve our financial burden and obtain some tax benefits. Based on the data published by Damodaran (2016), the average D/E ratio for information service sector is 22.19%. As we also have the plan to pursue a constant D/E ratio throughout the life of the project, we can assume it to be 25%. Then, the expected $E/(E+D)$ and $D/(E+D)$ would be 80% and 20%, respectively. In terms of the cost of debt, we checked the Line of Credit of Banco Comercial Português and Caixa Geral de Deposito for small and medium-sized companies and found that the annual effective rates are 3.931% and 3.859%, respectively. So, we can assume the cost of debt to be 4%.

➤ Levered Beta

Based on Damodaran (2012), if the beta of debt is zero and debt has a tax benefit to the firm, then the levered beta of the project can be computed using the formula below:

$$(8) \quad \beta_L = \beta_U \left[1 + (1 - T_C) \left(\frac{D}{E} \right) \right]$$

Where

β_L - Levered Beta for Equity of the Project

β_U - Unlevered Beta of the Project

Here, we assume the beta of debt to be zero. Still, according to the data published by Damodaran (2016), the unlevered beta of information service sector for Western Europe is 1.05. Then, as T_C and D/E are known, we can compute the levered beta of the project using formula (7), giving us the result of 1.25.

➤ Market Risk Premium

Fernandez et al (2016) conducted a survey about the market risk premium used to calculate the required return to equity in different countries by sending emails to economic professors, analysts, financial companies, etc. They received 55 answers in the case of Portugal, and it yielded the result of, on average, 7.9%. This value will be applied in the project valuation.

➤ Effective Tax Rate

The Portuguese corporate income tax (IRC) in force is 21%, and can reach up to 25% after adding the state and municipal tax. Hence, we can assume the effective tax rate to be 25% throughout the life of the project.

➤ Cost of Equity and WACC

Having the relevant data determined, we are now able to compute the cost of equity and WACC according to the formulas (4) and (3), giving us the results of 11.83% and 10.06%, respectively.

9.3 - NPV and Enterprise Value

Based on the forecast of the free cash flows and the assumptions on WACC and g , we then can compute the terminal value by using formula (5). See Table 8 below:

Table 8: Terminal Value of Project

FCFF ₂₀₂₆	€ 987,375
1+g	1.02
WACC-g	10.06% - 2%
TV ₂₀₂₆	€ 12,469,758.50

Source: Author

Finally, we can get the NPV of the project and enterprise value by using formulas (1) and (7), which are € 6,035,039.97 and € 6,235,039.97, respectively.

Table 9: NPV and Enterprise Value (in euros)

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
FCFF	-89,600	-46,600	-42,600	47,175	158,625	304,875	492,375	679,875	852,375	987,375
Discount Factor	0.9086	0.8255	0.7500	0.6814	0.6191	0.5625	0.5111	0.4643	0.4219	0.3833
PV(t)	-81,407.00	-38,467.45	-31,949.99	32,145.99	98,206.50	171,492.11	251,635.58	315,688.56	359,595.46	378,459.44
Terminal Value	12,469,758.50									
NPV of the Project	6,035,039.97									
Enterprise Value	6,235,039.97									

Source: Author

9.4 - Sensitivity Analysis

Because the theoretical business value is achieved based on assumptions and FCFF forecast of the project, it is necessary to conduct a sensitivity analysis to determine the most relevant variables that affect the business value.

The sales revenue of the project is estimated through the comparison with the single peer platform "jinrongbagueanv" in China, which could be questioned as the situation in Europe is different from China. Therefore, we should analyze the scenarios where the sales revenue fails to meet the forecast, or it is better than the expected. Also, as the WACC and g are two of the most important input, it is necessary to analyze the sensitivity of the project value to the changes of the two variables. Finally, as it is difficult for a startup to get a loan from banks at the cost of 4%, we should analyze how the changes in cost of debt will impact the EV. See Table 10, Table 11 and Table 12 below:

Table 10: Impact of the Sales Revenue on the Project Value (in euros)

		EV	NPV	Changes in EV
Changes in Sales Revenue	-50.00%	2,498,650.41	2,298,650.41	-59.93%
	-30.00%	3,993,206.23	3,793,206.23	-35.96%
	-10.00%	5,487,762.06	5,287,762.06	-11.99%
	0.00%	6,235,039.97	6,035,039.97	0.00%
	10.00%	6,982,317.88	6,782,317.88	11.99%
	30.00%	8,476,873.70	8,276,873.70	35.96%

Source: Author

From the table 10, we can conclude that the EV has an almost positive linear relationship with the sales revenue. When the sales revenue increases by X per cent, the EV will also increase by a bit more than X, vice versa. This is intuitive, as the sales revenue is fundamental input to compute the EV. In the case that the sales revenue decreases by 50%, the EV decrease by 59.93%, standing at € 2,498,650.41. And the NPV of the project is still positive, which means the project can still be pursued.

Table 11: Sensitivity of the EV to WACC and G

Changes in EV		g					
		0.00%	1.00%	2.00%	3.00%	4.00%	5.00%
WACC	8.00%	19.08%	33.20%	52.04%	78.40%	117.95%	183.87%
	9.00%	-0.38%	9.73%	22.73%	40.06%	64.33%	100.73%
	10.06%	-16.44%	-9.13%	0.00%	11.71%	27.28%	49.00%
	11.00%	-27.70%	-22.08%	-15.21%	-6.62%	4.41%	19.13%
	12.00%	-37.53%	-33.21%	-28.03%	-21.70%	-13.78%	-3.59%

Source: Author

We can see from Table 11 that the EV is very sensitive to both WACC and g in a negative way. When WACC decreases from 10.06% to 9%, the EV increases by more than 20%. In general, a variation of 1% in WACC will lead to an average change of 20% in EV. Likewise, a change of 1% in g will produce an average change of 13% in EV.

Table 12: Sensitivity of the EV to Cost of Debt (in euros)

		EV	NPV	Changes in EV
Cost of Debt	4.00%	6,235,039.97	6,035,039.97	0.00%
	4.50%	6,150,221.13	5,950,221.13	-1.36%
	5.00%	6,067,087.04	5,867,087.04	-2.69%
	5.50%	5,985,591.15	5,785,591.15	-4.00%
	6.00%	5,905,688.60	5,705,688.60	-5.28%
	6.50%	5,827,336.14	5,627,336.14	-6.54%

Source: Author

Table 12 shows that each 0.5% increase in cost of debt will produce an average drop of 1.3% in EV. If the cost of debt reaches as high as 6.5%, the EV will drop by 6.54%, being €5,827,336.14.

10 - Conclusion

This project work analyses the feasibility of building a financial platform based on WeChat official account and other social media to provide financial news, information and services to Chinese community across Europe. With all the advantages of WeChat official account and the need of professional financial services by different characteristics of Chinese citizens in Europe, we strongly believe that the platform will achieve great success.

Relatively speaking, the investment on this project is small, as it makes the most of the low cost of social media. However, its potential return is huge. The business valuation based on the DCF method showed that the project value could reach up to more than 6 million euros. Even in the scenario that the forecasted revenue decreases by 50%, the project value still stands at around 2.5 million euros, and the NPV of the project is still positive, which means the project can be pursued.

In the process of project execution by our team, we met a lot of challenges, for example, the instability of production of contents. It turns out that contents production is time-consuming, and really requires very professional knowledge in the fields of economics and finance. As our team is made up of students taking masters in Portugal, it is difficult for us to produce contents regularly, which makes the project go very slowly. However, this difficulty can be overcome if we receive an investment to build a stable team to deliver the service on a daily basis.

11 – Bibliography

Books, Published Articles and Working Papers:

- Benton, G. (2010). “The Chinese in Europe: Origins and Transformations”, *Religions & Christianity in Today’s China*, Vol. I, 2011, No. 1, pp. 62-70
- Benton, G. and Gomez, T. (2008). *Chinese in Britain, 1800–2000: Economy, Transnationalism, Identity*, Basingstoke: Palgrave
- Berk, J. and DeMarzo P. (2013). *Corporate Finance*, 3rd Edition, Pearson, 2013
- Brealey, A., Myers, C. and Allen, F. (2010). *Principles of Corporate Finance*, 10th edition. McGraw-Hill
- Damodaran, A. (2002). *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 2nd Edition. New York: John Wiley & Sons
- Damodaran, A. (2006). *Valuation Approaches and Metrics: A Survey of the Theory and Evidence*, Stern School of Business
- Damodaran, A. (2012). *Investment Valuation*, 3rd Edition, Wiley
- Fernández, P. (2006). *Valuing Companies by Cash Flow Discounting: Ten Methods and Nine Theories*, IESE Business School, University of Navarra
- Fernández, P. (2011). *WACC: Definition, Misconceptions and Errors*, IESE Business School, University of Navarra
- Fernández, P. (2015). *Company Valuation Methods*, IESE Business School, University of Navarra
- Fernández, P., Ortiz, A. and Acín, I. (2016). *Market Risk Premium Used in 71 Countries in 2016: A Survey with 6,932 Answers*, IESE Business School, University of Navarra
- Hill, T. and Westbrook, R. (1997). *SWOT Analysis: It's Time for a Product Recall*, *Long Range Planning*, Vol. 30, No.1, pp. 46 to 52, Elsevier Science Ltd.
- Kennedy, G. (2016). *Social Media: Master Social Media Marketing*, CreateSpace Independent Publishing Platform
- Latham, K. & Wu, B. (2013). *Chinese Immigration Into the EU: New Trends, Dynamics and Implications*, ECRAN
- Modigliani, F. and Miller, M.H. (1958). *The Cost of Capital, Corporation Finance and the Theory of Investment*, *The American Economic Review*, Vol. 48, No. 3, 261-97
- Pickton, D. and Wright, S. (1998). *What's Swot in Strategic Analysis?*, *Strategic Change*, 101-109, John Wiley & Sons.
- Remer, S. & Nieto, A. (1994). *A Compendium and Comparison of 25 Project Evaluation Techniques*, Harvey Mudd College of Engineering and Science

- Scott, M. and Bruce, R. (1987). Five Stages of Growth in Small Business, Long Range Planning, Vol. 20, No. 3, pp. 45 to 52, Pergamon Journals
- Steiger, F. (2008). The Validity of Company Valuation Using Discounted Cash Flow Methods, European Business School
- Žižlavský, O. (2014). Net Present Value Approach: Method for Economic Assessment of Innovation Projects, Procedia - Social and Behavioral Sciences 156, 506-512

Digital Support:

- Data about most viewed articles pushed by WeChat official account in 2015. Retrieved from http://ep.ycwb.com/epaper/ycwb/html/2016-06/20/content_67015.htm#article
- DMR WeChat Report (November 2016). Retrieved from <http://expandedramblings.com/index.php/wechat-statistics/>
- DMR Weibo Statistic Report (December 2016). Retrieved from <http://expandedramblings.com/index.php/weibo-user-statistics/>
- EY - Estimating Risk-free Rates for Valuations. Retrieved from <http://www.ey.com/Publication/vwLUAssets/EY-estimating-risk-free-rates-for-valuations/%24FILE/EY-estimating-risk-free-rates-for-valuations.pdf>
- Germany 10-Year Bond Yield. Retrieved from <http://www.investing.com/rates-bonds/germany-10-year-bond-yield-historical-data>
- Investment received by the WeChat official account ID: collegedaily. Retrieved from <http://36kr.com/newsflash/coop/17067.html>
- Kantar China Social Media Impact Report 2015. Retrieved from <http://us.kantar.com/media/908826/0202-en-infographic-1950.pdf>
- Number of Chinese investors attracted by Golden Visa program of Portugal. Retrieved from http://www.sef.pt/documentos/56/Mapa_ARI_EN_november16.pdf
- Number of Chinese residents in Portugal (2015). Retrieved from https://sefstat.sef.pt/Docs/Rifa_2015.pdf
- Number of registered WeChat official account. Retrieved from <http://www.iimedia.cn/46539.html>
- Revenue of the financial official account “jinrongbaguanv”. Retrieved from http://finance.cnr.cn/gs/20160707/t20160707_522610210.shtml
- Unaudited consolidated results for the third quarter (“3Q2016”) of Tencent. Retrieved from <http://www.tencent.com/en-us/content/at/2016/attachments/20161116.pdf>

Appendix 1 – Income Statement of the Project (in euros)

Year to December 31	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1 Sales revenue	15,000	45,000	85,000	190,000	365,000	560,000	810,000	1,060,000	1,290,000	1,470,000
2 Cost of goods sold	0	0	0	0	0	0	0	0	0	0
3 Office Renting	3,600	3,600	3,600	3,600	6,000	6,000	6,000	6,000	6,000	6,000
4 Payroll	84,000	84,000	120,000	120,000	144,000	144,000	144,000	144,000	144,000	144,000
5 Office Supply and Other	17,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
6 EBITDA	-89,600	-46,600	-42,600	62,400	211,000	406,000	656,000	906,000	1,136,000	1,316,000
7 Depreciation	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
8 EBIT	-91,100	-48,100	-44,100	60,900	209,500	404,500	654,500	904,500	1,134,500	1,314,500
9 Interest Expense	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
10 Pretax Income	-92,700	-49,700	-45,700	59,300	207,900	402,900	652,900	902,900	1,132,900	1,312,900
11 Income Tax at 25%	0	0	0	14,825	51,975	100,725	163,225	225,725	283,225	328,225
12 Net Income	-92,700	-49,700	-45,700	44,475	155,925	302,175	489,675	677,175	849,675	984,675

Appendix 2 – Balance Sheet of the Project (in euros)

Year to December 31	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Assets										
1 Cash and Cash Equivalents	107,300	150,300	154,300	244,475	355,925	502,175	689,675	877,175	1,049,675	1,184,675
2 Accounts Receivable	0	0	0	0	0	0	0	0	0	0
3 Inventories	0	0	0	0	0	0	0	0	0	0
4 Total Current Assets	107,300	150,300	154,300	244,475	355,925	502,175	689,675	877,175	1,049,675	1,184,675
5 Property, Plant and Equip.	0	0	0	0	0	0	0	0	0	0
6 Goodwill	0	0	0	0	0	0	0	0	0	0
7 Total Assets	107,300	150,300	154,300	244,475	355,925	502,175	689,675	877,175	1,049,675	1,184,675
Liabilities										
8 Accounts Payable	0	0	0	0	0	0	0	0	0	0
9 Debt	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
10 Total Liabilities	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Owner's Equity										
11 Owner's Equity	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
12 Net Income	-92,700	-49,700	-45,700	44,475	155,925	302,175	489,675	677,175	849,675	984,675
13 Dividends	0	0	0	0	0	0	0	0	0	0
14 Total Owner's Equity	67,300	110,300	114,300	204,475	315,925	462,175	649,675	837,175	1,009,675	1,144,675
15 Total Liabilities and Equity	107,300	150,300	154,300	244,475	355,925	502,175	689,675	877,175	1,049,675	1,184,675