

# The Banking Network as a Transmission Channel of Migrant Remittances: The Case of Greek and Italian Banks in Albania

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**Abstract** The paper examines the role of the banking network of foreign banks, namely Greek and Italian banks, on the transfer of remittances of Albanian immigrants. Remittances through the official network that is formed mainly by the banking network, grew much higher in comparison to non-official network during the period 1994–2006. The paper finds that the growth of the amount of remittances conveyed through the official network as part of the total amount of remittances is related to the evolution of branches of Greek and Italian banks in Albania.

**Keywords** Albania · Bank · Greece · Italy · Migration · Remittances

**JEL Classification** F22 · F24 · G21

## Introduction

An emigration movement from Eastern European countries has characterized the decade of 1990's. Albania faced one of the most important emigration movements considering its population, see Kule et al. (1999), Martin et al. (2002) and Carletto et al. (2006). Since 1990, 20% of the Albanian population has left the country and now lives abroad (Carletto et al. 2006). Greece and Italy are the principal host countries of Albanian immigrants. According to population census in 2001, 438,000 Albanian legal immigrants were registered in Greece; there were 164,000 in Italy the same year (Bonifazi and Sabatino 2003). Albanian immigrants legally residing

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in other countries of Europe and North America are estimated only in the tens of thousands (Carletto et al. 2006). In addition to legal immigrants, it is estimated that about 30,000 Albanians reside illegally in Italy, and some more in Greece (Carletto et al. 2006).

One of the parameters of the immigration phenomenon is the importance of remittances for the economy of the sending countries. In the case of Albania, remittances cover constantly more than 10% of the Gross Domestic Product, rising even to 19% in some years during the period 1994–2006.

Numerous studies have focused on immigrants' remittances by examining different aspects. The use of remittances for investments or consumption purposes has been a main issue. Hamdouch (2005) for the case of Morocco, Leon-Ledesma and Piracha (2004) for the case of Eastern Europe, Woodruff and Zenteno (2007) and Zarate-Hoyos (2004) for the case of Mexico have found that remittances affected investments more than consumption. Airola (2007), Kok and Onan (2004), El-Sakka and McNabb (1999) insisted more on the consumption effect of remittances in the case of Mexico, Turkey and Egypt, respectively. Uruçi and Gedeshi (2003) concluded on the Albanian case that remittances have been used much more for consumption than for investments. They indicated the absence of a plan to use remittances as a tool for local development. The management of remittances in order to increase development has been the object of other studies. Glytsos (2002) commented on an insufficient management of remittances in the case of Mediterranean countries. In the Bulgarian case Bodeva (2005) noted that good economic governance may be more important than incentive measures to attract remittances into investments. Gubert (2005) for the case of Africa, Nyberg Sorensen (2004) for the case of Morocco, and Koksal and Liebig (2005) for the case of Turkey point out the importance of financial institutions in channelling remittances into productive investments. Remittances are found to increase inequality of income as Barham and Boucher (1998) suggest in the case of Nicaragua. Koechlin and Leon (2007), based on a sample of 78 countries, found that this is true in the first stages of migration but then remittances tend to lower this inequality. Remittances reduce poverty according to several studies such as Acosta et al.'s (2006) survey based on the case of Latin America, and Adams and Page (2005) through the example of 71 developing countries. Sall (2005) examining the case of Sub-Saharan countries found that remittances contributed to the creation of basic infrastructure, but today the effect remittances have on development is less evident. Osili (2007) based on the case of Nigeria suggests that remittances can contribute to economic development by reducing poverty and providing savings necessary for future investments.

Very few studies have focused on the role of financial network on remittances. In two previous articles (Karafolas 1995, 1998), it was found that immigrants favoured the presence of banks in the host countries, as shown by the case of Greek, Italian, Portuguese and Spanish migrants. Amuedo-Doranes and Pozo (2005) found in the case of Mexican immigrants that those with less regular status and those without documents do not use the banking system for the transfer of saving. The banking system is used by the most educated and those with a network of friends and family in the host city. Using the sample of Mexican immigrants in the US, Amuedo-Doranes and Bansak (2006) found that banking was limited. A bank account did not

help to increase monthly remittances flows but it did help to boost the amount brought back home. Orozco (2002, 2003), indicated the lower cost of remittances through the official financial network.

The paper focuses on the role of the banking system on the growth of remittances and particularly remittances through the financial network in the case of Albanian immigrants. In particular the relation between the development of the banking network of Greek and Italian banks, the two principal host countries of Albanian immigrants, and the part of remittances conveyed through the official network to total remittances is examined. Money transfer companies have not been considered in this study since their official authorisation in Albania dates only from 2003 (Bank of Albania 2005). The empirical results support the idea that the increased importance of the financial channel on remittances is related to the growth of branches of Greek and Italian banks.

Following the introduction, the paper examines the evolution of total remittances of Albanian immigrants by distinguishing the parallel and the official network. In the third section the paper focuses on the networks created by banks in Albania. Empirical results are presented in section four while conclusions are in section five.

## Remittances of Albanian Immigrants

The Bank of Albania provides data registered in Albania. Only remittances transferred through the official network, banking system and money transfer companies, are registered officially (Bank of Albania 2004). Remittances transferred by the parallel market are only estimated (mostly this is money transferred by immigrants during their return to Albania, permanently or for holiday visits). The Bank of Albania has data on the total amount of remittances without distinction of country of provenance of remittances and between banks and money transfer companies. Data have been provided to the author by the Bank of Albania including estimations for the remittances by the official network and by the parallel market (Bank of Albania 2004). Calculations based on Balance of Payments Bulletin of the Bank of Albania have been used for the period 2004–2006. Bulletins offer estimations on the workers' remittances through the official and the parallel market.

Total remittances of Albanian immigrants, reached the amount of 1,174 million US\$ in 2006 which is more than triple in comparison to those in 1994. Remittances followed an almost continuous growth. Some exceptions are 1997 (which followed the chaos in the economy of Albania because of the pyramid schemes), 1999 and 2005, which followed the exceptional growth of 2004 (year of the Olympic Games in Greece during which an increased number of Albanian immigrants were employed) Table 1.

This evolution is influenced particularly by the growth of remittances through the official network. The official network appears to win the confidence of Albanian immigrants for the transfer and saving of their money. The growth of remittances through the official and parallel markets appears in Table 2. While remittances through parallel markets have a limited fluctuation, with no

**Table 1** Remittances of Albanian immigrants, (in million US\$)

Year	Official network	Parallel market <sup>a</sup>	Total	GDP <sup>b</sup> (%)
1994	28	350	378	19.4
1995	60	325	385	15.5
1996	60	440	500	18.6
1997	84	183	267	11.6
1998	114	339	453	14.8
1999	89	279	368	10.0
2000	163	368	531	14.3
2001	244	371	615	15.2
2002	282	349	631	13.9
2003	310	468	778	11.4
2004	470	558	1028	13.5
2005	398	600	998	11.6
2006	314	860	1174	13.0

Source: Bank of Albania 2004 (letter to author, 24 December 2004) for period 1994–2003

Bank of Albania, Balance of Payments Bulletin for 2004 (p. 24)

Bank of Albania, Balance of Payments Bulletin for 2005 (p. 17)

Bank of Albania, Balance of Payments Bulletin for 2006 (p. 22)

<sup>a</sup> Estimations of the Bank of Albania

<sup>b</sup> Gross domestic product. From 1994 to 2001, calculations of Uruçi and Gedeshi (2003), from 2002 to 2003, author's calculations, from 2004 to 2006 Bank of Albania, Balance of Payments Bulletin

**Table 2** Evolution of remittances of Albanian immigrants (1994 = 100)

Year	Official network	Parallel market	Total
1994	100	100	100
1995	214	93	102
1996	214	126	132
1997	300	52	71
1998	407	97	120
1999	318	80	97
2000	582	105	140
2001	871	106	163
2002	1007	100	167
2003	1107	134	206
2004	1679	159	272
2005	1421	171	264
2006	1121	246	311

Source: Table 1

notable growth, remittances through the banking system and money transfer companies grew considerably, more than ten times since 2002 in comparison to 1994.

**Table 3** Distribution of remittances of Albanian immigrants by transmission channel (in %)

Year	Official network	Parallel market	Total
1994	7.4	92.6	100
1995	15.6	84.4	100
1996	12.0	88.0	100
1997	31.5	68.5	100
1998	25.2	74.8	100
1999	24.2	75.8	100
2000	30.7	69.3	100
2001	39.7	60.3	100
2002	44.7	55.3	100
2003	39.8	60.2	100
2004	45.7	54.3	100
2005	39.9	60.1	100
2006	26.7	73.3	100

Source: Table 1

This evolution is due to the low base of remittances through the official network at the beginning of the examined period. Nevertheless, it shows dynamism of the official network, which tends to take first place in immigrants' remittances.

Table 3 shows the part of remittances of official and parallel markets. Before 1997 remittances through the official network remained at a very low level, not more than 15% of the total.

The chaos of the pyramid schemes reflected the necessity for an official network that could guarantee people's savings (Kalaitzopoulou et al. 2000). Individuals and non-financial companies without the supervision of the authorities, principally the central bank, could not offer such a guarantee. The consequence of pyramids was a loss of confidence in the transfer through the parallel market. In 1997 money transferred through this market diminished to almost half in comparison to the three previous years. On the contrary, money transferred through the official network continued its growth. In 1997 the official remittances represented 31.3% of the total remittances and reached to almost 40% in the period 2000–2006. This period is characterized by the growth of the presence of the foreign banks and especially their branches' network in Albania.

### The Banking Network

The banking system in Albania faced important changes from the 1990s to 2007. These changes have been characterised by the involvement of foreign banks in this country, the acquisition of state owned banks from private ownerships and the creation of joint venture banking institutions with the Albanian state. The presence of foreign banks is under the form of a subsidiary bank or of branches. The Bank of Albania Banking Supervision Annual Reports for the period 1998–2007 offer a review of main changes on the Albanian banking system. In 1992 three state owned banks were carrying out

banking activities, National Commercial Bank, Savings Bank and Rural Commercial Bank. In 1993 and 1994 three new banks were created by Italian, Kosovar and Arab owners. In 1996, two Greek banks were established in Albania: the Tirana Bank, a banking institution owned by Pireaus Bank, and the National Bank of Greece under the form of branch. In 1998 a Greek bank, Alpha Bank, began its operations through its branch in Tirana, while another (American Bank of Albania) owned by USA and Albanian capital, with branches in Greece, began to operate in Albania. The same year the Bank of Albania revoked the licence of the Rural Commercial Bank. In 1997 the International Commercial Bank, a private bank, began its activities. In 1999, four new banking institutions began their activities. The Commercial Bank of Greece started its presence in Albania with the subsidiary Intercommercial bank; FEFAB Bank, a joint venture institution owned by the Albanian Government (45% of the capital) and three international institutions (EBRD, IFC and IMI owning the rest 55%). Next, a bank owned by private capital from Malaysia and another owned by a Bulgarian bank were established. In 2000 a state owned bank, the National Commercial Bank, was sold to private capitals and since that year the Albanian state has owned only one bank. A new private bank owned by Kuwait capitals was licensed in 2002. In December 2003 the Albanian government sold the only banking institution owned entirely by the state, the Savings Bank, to the Austrian Raiffeissen Bank. The same year a new domestic private bank, Credins Bank, began operating. In 2004 the Popular Bank, a private bank, started its operations. In December 2005 a new private bank was licensed. The same year the First Investment Bank (of Bulgarian interests) applied for its transformation from branch to a subsidiary. In June 2005 the Dardania bank was sold to a bank of Italian origin, the Italian Development Bank. In 2006 a new bank with Albanian capital was licensed.

During this period four Greek banks and two Italian operated in the Albanian banking market. Table 4 presents the evolution of Greek and Italian banks and their branches during the period 1994–2006.

**Table 4** Greek and Italian banking network in Albania

	Number of Greek and Italian banks	Branches of Greek and Italian banks
1994	1	1
1995	1	1
1996	3	3
1997	3	5
1998	4	7
1999	5	9
2000	5	10
2001	5	15
2002	5	23
2003	5	29
2004	5	46
2005	6	63
2006	6	91

Source: Bank of Albania, Banking Supervision Annual Report for years 1998–2006, author's elaboration of data

## Empirical Framework and Estimation Results

The question that arises is whether the ratio of the remittances channelled through the financial network ( $R_{fn}$ ) to total remittances ( $R_t$ ) is affected by the evolution of the banking network created by Greek and Italian banks. Studying the ( $R_{fn}/R_t$ ) ratio as the figure of merit was preferred over studying simply the  $R_{fn}$  because it avoids the influence on remittances due to the growth of immigrants' population or due to the growth of the total migrants' income in the host country.

The study uses yearly data for the official network part in total (ON), Table 3, and branches of Greek and Italian banks (Gib), Table 4, for the period 1994–2006. Branches are a more appropriate explicative factor than the number of banks since one bank can have an extensive network of branches.

From the preliminary analysis of the time series of  $R_{fn}/R_t$  and of the number of branches of Greek and Italian banks it resulted that the series are not stationary and therefore for the reliability of results the analysis that follows is based on the natural logarithms of price relatives<sup>1</sup>:  $R_{it} = \ln(p_{it}/p_{it-1})$ . In Table 5 the allocations of attributions of the official network part in total ( $R_{on}$ ) and the branches of Greek and Italian banks ( $R_{Gib}$ ) are described statistically. More specifically, the mean return of the first series is close to 0.1, which means that the middle growth of the official network part in total the time period 1994–2006 was positive in average, while the average price branches of Greek and Italian banks reaches 0.38. The return distributions for both series of  $R_{on}$  and  $R_{Gib}$  are approximately mesokurtic (2.17 and 2.91, respectively) and positively skewed. Furthermore, the low value of the Jarque and Bera (1987) statistics leads to the non rejection of the normal hypothesis for both return series. The test for the existence of a unit root with the Dickey and Fuller (1981) statistic showed that the  $R_{on}$  and  $R_{Gib}$  returns series have been produced by stationary series.

**Table 5** Sample statistics of  $R_{on}$  and  $R_{Gib}$  return series

Statistics	$R_{on}$	$R_{Gib}$
Observations	12	12
Mean	0.102	0.376
Median	0.041	0.352
SD	0.412	0.271
Skewness	0.811	1.444
Kurtosis	2.829	5.506
Jarque–Bera	1.332	7.313
Augmented Dickey–Fuller (ADF)	−8.579	−8.861

<sup>1</sup>  $p_{it}$  is the price of official network part in total or the branches of Greek and Italian banks at time  $t$ .

**Table 6** Test for serial dependence in first and second moments

Returns				Squared returns		
Lags	Autocorrelation	Lags	Autocorrelation	Lags	Autocorrelation	Lags
1	-0.347	-0.347	1.840	-0.097	-0.097	0.143
2	0.241	0.137	2.812	0.3	0.294	1.659
3	0.006	0.145	2.813	-0.033	0.018	1.679
4	-0.011	-0.003	2.816	-0.07	-0.176	1.781
5	-0.014	-0.064	2.820	-0.111	-0.14	2.077
6	-0.085	-0.124	3.022	-0.122	-0.075	2.495
7	0.185	0.173	4.169	-0.147	-0.102	3.221
8	-0.135	0.023	4.932	-0.166	-0.163	4.380
9	-0.161	-0.327	6.381	-0.011	0.009	4.386
10	0.004	-0.198	6.382	-0.057	0.006	4.662

LB(*n*) are the *n*-lag Ljung-Box statistics for  $R_{on_t}$  and  $R^2_{on_t}$ , respectively. LB(*n*) follows Chi-square distribution with *n* degree of freedom; the sample period contains 12 yearly returns. The null hypothesis of strict white noise is not rejected

In our attempt to test the hypothesis of independence, we employed the Ljung and Box (1978) statistics to estimate the  $\{R_{on_t}\}$  and  $\{R^2_{on_t}\}$  series reported in Table 6. The autocorrelations depict the independence on the first and the second moment and consequently the null hypothesis of strict white noise is not rejected.

Considering the international literature and the preliminary results cited above, the regression model renders a very good choice for modelling the relation of official network part in total and the branches of Greek and Italian banks. The specification we suggest is:  $\{R_{on_t}\} = b_0 + b_1 R_{GIB_{t-1}} + u_t$ .

The hysteresis—lag of 1 year is explained by the fact that immigrants decide to use the banking network after the branch creation and usually it takes a time period to be informed on the branch’s creation and to trust it.

Some diagnostic tests were performed to establish goodness of fit and appropriateness of the model. First, it was examined whether the standardized residuals and squared standardized residuals of the estimated model are free from serial correlation. The results show (Table 7) that the LB statistics for the standardized residuals and standardized squared residuals are not significant. In addition, the independence of the standardized residuals is confirmed by the Durbin-Watson statistics (1.76), (Durbin and Watson 1950). Also, the ARCH-LM Test concerning four lags in the residuals ( $N \times R^2 = 4.88$ ) (Table 8) showed that the variance does not exhibit heteroskedasticity (Engle 1982); that has been confirmed by the application of White test ( $N \times R^2 = 0.258$ ). Furthermore, the statistic test Jarque-Bera (0.88), (Jarque and Bera 1987), showed the adoption of the hypothesis of normality of the residuals.

Table 9 presents results of the regression. The adjusted  $R^2$  indicates that changes of the official network part in total are affected considerably by the

**Table 7** LB test for the residuals of the regression model  $R_{on_t} = b_0 + b_1 R_{Gib_{t-1}} + u_t$

Residuals				Squared Residuals			
Lags	Auto-correlation	Partial correlation	LB(n)	Lags	Auto-correlation	Partial correlation	LB(n)
1	0.013	0.013	0.002	1	-0.165	-0.165	0.3885
2	-0.279	-0.279	1.238	2	-0.423	-0.463	3.2382
3	0.071	0.086	1.329	3	0.245	0.087	4.3117
4	0.063	-0.021	1.411	4	-0.115	-0.314	4.58
5	-0.217	-0.191	2.532	5	-0.033	0.071	4.6053
6	-0.302	-0.318	5.14	6	0.08	-0.182	4.7901
7	0.248	0.177	7.335	7	-0.101	-0.021	5.1562
8	0.062	-0.105	7.516	8	0.153	0.087	6.2789
9	-0.16	-0.03	9.352	9	0.049	0.054	6.4509
10	0.001	-0.088	9.352	10	-0.191	-0.035	11.679

LB(n) are the n-lag Ljung-Box statistics for the residual series. LB(n) follows chi-square variable with n degree of freedom; the series of residual contains 11 elements

**Table 8** ARCH-LM test for squared residuals

Squared residuals lag(-1)	Squared residuals lag(-2)	Squared residuals lag(-3)	Squared residuals lag(-4)	F-statistic	Observation × R-squared
-0.48083 (-0.695)	-1.533816 (-2.05)	-0.783554 (-1.143)	-1.02875 (-1.696)	1.55	4.88

Figures in parentheses are t-statistics

**Table 9** Mean equations  $R_{on_t} = b_0 + b_1 R_{Gib_{t-1}} + u_t$

$b_0$	$b_1$	Adjusted $R^2$
-0.25 (0.166)	0.76** (0.357)	0.28

Standards errors are shown in parentheses

\* Statistical significance at the 1% level

\*\* Statistical significance at the 5% level

changes of branches of Greek and Italian banks while in parallel the positive coefficient  $b_1$  (0.76) and its statistical significance is interpreted as that the evolution of Greek and Italian banks' branches in Albania influenced the part of the official network remittances on the total remittances in Albania. In other words, Albanian immigrants tend to prefer the official network for the transfer of their money after the development of the banking network of Greek and Italian banks in Albania.

## Conclusions

The aim of the paper is to reveal the effect of the banking network to remittances paid through the official channels, which are the banking network and the money transfer companies. This hypothesis was examined for the case of Albanian immigrants who constitute one of the most important worldwide migration communities compared to the population of the country, approaching 20%. The paper examined the relation between the part of remittances through the official network to total remittances and the evolution of branches of Greek and Italian banks. The official channel faced a huge growth in comparison to that of the parallel market during the examined period 1994–2006. This growth permitted the official channel to handle almost 40% of the total remittances in the period 2001–2006. That can be compared to something just above 10% during the period 1994–1996. The banks of Greece and Italy were chosen since these countries are the two main host countries of Albanian immigrants. Additionally, their banking presence is the most important considering the number of banks and branches in Albania. Money transfer companies were not considered since their official authorisation in Albania was only granted in 2003. Empirical results showed that the growth of the banking network, considering the branches of Greek and Italian banks in Albania, had an important positive effect on the growth of remittances through the official channel expressed as a percentage of total remittances. Such a study may be applied to other migration countries. Further investigations may include money transfer companies but a bigger time period must be considered.

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