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Dieser Artikel untersucht die Rimessen, die ausländische Arbeitskräften in der Schweiz in ihre Heimatländer überweisen. Unter den Ursprungsländern für Rimessen steht die Schweiz weltweit an dritter Stelle. Allerdings ist der überwiegende Anteil dieser Rimessen auf Löhne von Grenzgängern aus Frankreich, Italien und Deutschland zurückzuführen. Zudem schätzen wir, dass zwei Drittel der Rimessen von in der Schweiz ansässige Ausländern ebenfalls in europäische Länder mit hohem Pro-Kopf Einkommen fliessen. Diese Ergebnisse legen nahe, dass Rimessen aus der Schweiz einen vernachlässigbaren Einfluss auf wirtschaftliche Entwicklung haben, im Vergleich zu anderen bedeutenden Ursprungsländern.

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Remittance Outflows from Switzerland

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This paper examines the structure of remittances originating from Switzerland. We find that while Switzerland is reported to be the third largest source of remittances worldwide, the vast majority of these outflows are wages earned by non-resident commuters from France, Italy and Germany. We further estimate that two-thirds of the remittances made by immigrants resident in Switzerland flow to European countries with high per capita income. These findings suggest that the development impact of remittance outflows from Switzerland is negligible compared to that of other major source countries.

JEL Codes: F22, F24
Keywords: Remittances, migration, cross-border commuters

1 Introduction

Remittances by migrant workers are increasingly seen as an important source of economic development, particularly for low-income countries. Currently the second most important form of foreign exchange inflows for developing countries, remittance volumes are comparable to FDI and surpass both non-FDI private capital inflows and official aid. Moreover, while the volume of private capital flows is strongly dependent on economic performance in recipient countries, remittance inflows provide a more stable source of income. As a consequence, recent evidence suggests that remittance inflows not only significantly contribute to reducing poverty, but also smooth economic activity in recipient countries (IMF 2005).[1]

This paper examines remittance outflows originating from Switzerland. A precise measurement of cross-border remittance flows is difficult to obtain. Existing data, however, suggest that Switzerland is the third largest source of remittance outflows worldwide. Despite the large volume of remittance outflows originating from Switzerland (CHF 17.4 billion in 2006), the structure and development of these cross-border transactions have not yet been reviewed in detail. This paper aims to narrow this knowledge gap.

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1 The evidence on the growth impact of remittances is mixed so far. While, Giuliano and Arranz (2005) find positive effects of remittances on growth, the IMF (2005) finds no significant correlation.

Our main findings are the following: firstly, the vast majority of officially reported remittances originating from Switzerland (76% in 2006) are attributable to the wages earned by non-resident cross-border commuters who live in France, Italy, Germany and Austria. Remittances by immigrant workers resident in Switzerland are less significant – CHF 4.2 billion in 2006. Secondly, in addition to remittances by cross-border commuters, we estimate that two-thirds of the remittances made by resident immigrants flow to European countries with high per capita income. Thirdly, we show that the Swiss National Bank's method of calculating remittance flows appears to be sufficiently accurate despite the fact that underlying surveys are not conducted on a regular basis.

2 Remittance Volume and Structure

There is no universally applied definition of remittances. The International Monetary Fund calculates total remittances as the sum of three balance of payments components: "Compensation of employees", "Workers' remittances" and "Migrants' transfers" (see IMF 2005).[2] According to the IMF (1993), compensation of employees is defined as the sum of non-resident workers' earnings. Thus, it comprises wages, salaries and other benefits for cross-border and seasonal workers. Workers' remittances are transfers effected by resident immigrants.[3] This group includes those workers who move and stay abroad for one year or longer. Migrants' transfers comprise the net worth of immigrants that is transferred when said individuals move their place of residence from one country to another. Both compensation of employees and workers' remittances are components of the current account. Migrants' transfers, in contrast, are counted as capital transfers, and are thus a component of the capital acconnt.

2.1 International Comparison

Recent statistics suggest that Switzerland is the third largest origin of remittance outflows worldwide. Data from the IMF Balance of Payments Statistics Yearbook 2006 reveals that in 2005 only the United States (USD 41 billion / CHF 50.8 billion) and Saudi Arabia (USD 14 billion / CHF 17.4 billion)

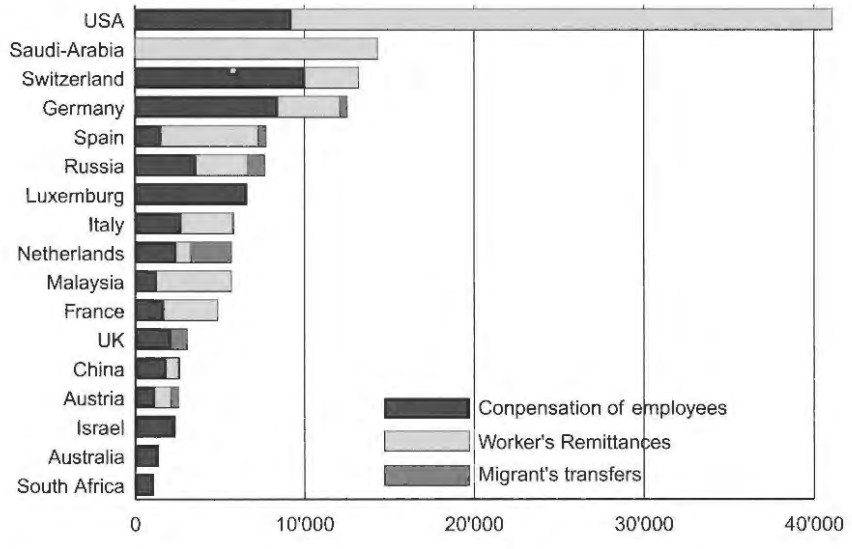
2 The sixth edition of the IMF Balance of Payments Manual (IMF 2007) gives a slightly different definition.

3 Please note that, in accordance with the definition for non-resident foreign workers, total compensation including social security benefits are counted as remittances. However, in the case of resident foreign workers, only actual transfers are counted as such.

were subject to more substantial remittance outflows than Switzerland (USD 13.2 billion / CHF 16.4 billion) as shown in Chart 1. Furthermore, in per capita terms Switzerland was the second largest source of remittance outflows (USD 1,800 = CHF 2,232 per capita)[4]. As in other countries, remittance outflows from Switzerland have grown rapidly in recent years. Between 2000 and 2005, the total volume of remittances from Switzerland increased by more than 28%.

Switzerland's high ranking is mainly attributable to the compensation of non-resident employees (that is cross-border commuters and workers with short-term work permits spanning 1 to 4 months). In 2005, non-resident employees' wages accounted for USD 10 billion (CHF 12.4 billion), that is nearly 80% of total remittance outflows, which makes Switzerland the country with the largest outflow of payments to cross-border and short-term workers. Only the US and Germany had similar outflows. Remittances by resident immigrants in Switzerland are less significant in international terms. These amounted to just over USD 3 billion (CHF 3.7 billion) in 2005 – the seventh largest volume figure in this category worldwide. For Switzerland, like many other countries, no separate data is available for capital transfers by immigrant workers.

Figure 1: Structure of remittance outflows in 2005 (million USD)



Source: Own calculation based on IMF Balance of Payments Statistics.

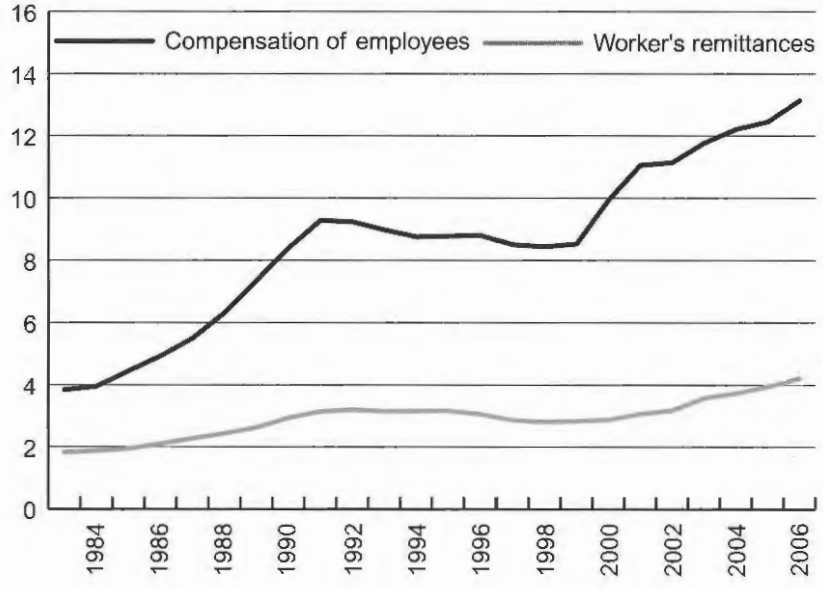
4 In 2005, Luxembourg had the highest remittance outflows per capita (USD 14,400). Significant remittance outflows in per capita terms also originated from Saudi Arabia (USD 620) and the Netherlands (USD 350).

2.2 Remittance Structure

This section explores the structure of remittance outflows from Switzerland and the development thereof over time. Our analysis is based on data from the SNB's balance of payment statistics for 1981–2006.

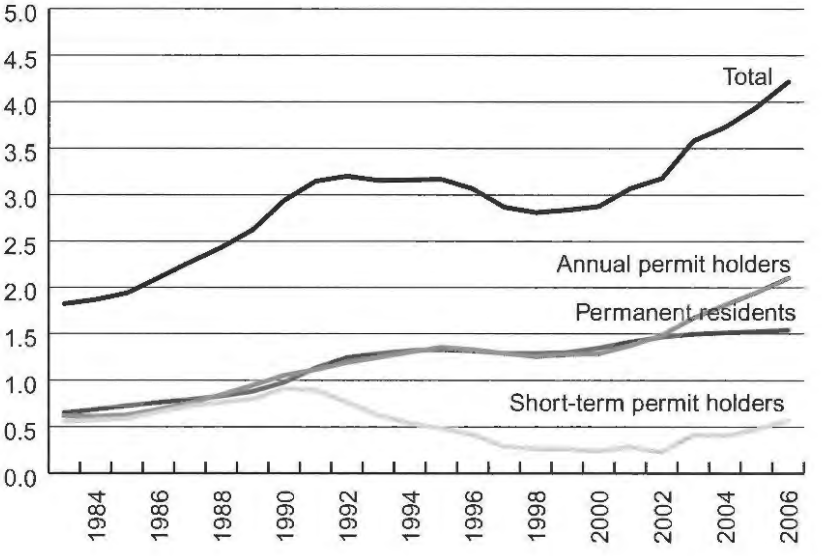
In 2006, compensation for non-resident employees accounted for CHF 13.2 billion, which equals to 76% of total remittances (CHF 17.4 billion). Chart 2 shows that the compensation of non-resident employees has increased more than threefold over the past 25 years, and has thus doubled in real terms. Since 2000 alone, the volume of these payments has increased by more than CHF 5 billion. Looking at the structure of payments to non-resident employees, we see that compensation for cross-border commuters accounted for CHF 12.8 billion (97%) in 2006. By contrast, wages for workers with short-term permits accounted for just CHF 400 million.

Figure 2: Remittance outflows from Switzerland in CHF billion



Source: SNB Balance of Payments Statistics.

Figure 3: Remittance outflows by migrant workers in Switzerland in CHF billion



Source: SNB Balance of Payments Statistics.

In Switzerland, resident immigrants can be divided into three sub-groups: permanent residents, holders of annual permits and holders of short-term permits.[5] While total estimated workers' remittances were decreasing slightly in the 1990s, there has been an upward trend since 2000 (see Chart 3). In 2006, workers' remittances totalled an estimated CHF 4.2 billion – about 50% higher than six years previously. This increase can be traced back primarily to an increase in transfers on the part of annual permit holders. These accounted for CHF 2.1 billion in 2006 – 60% higher than the figure in 2000 (CHF 1.3 billion). This increase is attributable to both the rise in immigrants' average wages and the climb in the number of immigrants now living in Switzerland. The number of annual permit holders is 42% higher than in 2000, while corresponding wages have increased by less than 15%. The 1999 signing of the bilateral agreements between Switzerland and the European

5 Residents who hold "C-permits" are entitled to stay in Switzerland on a permanent basis. The "B-permit", on the other hand, is an annual permit. It entitles its holder to stay in Switzerland for at least one year. It is possible to renew this permit. The "L-permit" is a short-term permit. Holders are generally entitled to stay in Switzerland for 1 to 12 months. This period can be extended to 24 months in certain circumstances. Only short-term employees (that is those who work from 4 to 12/24 months) are taken into account when estimating transfers. Employees holding short-term permits (1 to 4 months) are taken into account within the "Compensation of employees" category.

Union may have been a factor in the increase in the number of immigrants with annual permits. The freedom of movement agreement – which makes it easier for EU citizens to move to Switzerland and for Swiss citizens to move to the EU – is an integral component of these treaties, which came into force in June 2002.

3 Measurement of Remittances

It is possible to measure remittance flows directly by eliciting information on cross-border financial transactions. Alternatively, remittance flows can be estimated on the basis of surveys on household income use, or by analysing data on employee numbers, average wages and the average percentage of wages which employees transfer abroad. This section covers these various methods and explains how the SNB procures data on remittance outflows.

3.1 Methodologies

In order to measure remittances, a number of countries rely on the International Transaction Reporting System (ITRS), which requires domestic banks to record all balance of payments transactions conducted through the banking system. Another possible method is to implement direct reporting systems which legally oblige money transfer operators to provide data compilers with all the relevant and necessary data. Both of these methods only record remittances sent via formal transfer channels (for example banks and money transfer operators). Remittances via informal channels (for example money sent through the mail or hand-carried) are not recorded. In addition, transactions below a certain threshold are often not recorded, because there is no obligation to report these amounts. Actual remittance amounts are therefore liable to be significantly understated. On the other hand, ITRS may record personal cross-border transfers which are not remittances in character, for example transfers by holidaymakers.

An alternative way of estimating remittance flows is to conduct surveys among migrant households. Unlike ITRS, household surveys can record financial and non-financial ("in-kind") remittances sent via both formal and informal channels. Other countries estimate remittances on the basis of data on employee numbers, average wages and the average percentage of wages which employees transfer home.

3.2 Remittance Measurement in Switzerland

Compensation of non-resident employees
The SNB estimates remittances by non-resident foreign workers on the basis of information on the number of cross-border commuters and workers with short-term permits (that is less than 4 months) and their average wages (including employee and employer social security contributions). In line with balance of payment standards, total compensation of non-resident foreign workers is regarded as a form of remittance.

Remittances by resident foreign employees
The SNB uses a more complex method to estimate remittances by resident immigrant workers. Given that income statistics are not available per immigrant group, the total income per group (permanent residents, holders of annual and short-term permits which are valid for 4 to 12 months) is estimated by multiplying the number of employed immigrants per group by their average wage.[6] The next step is to multiply the total wages earned by the estimated rate at which immigrants transfer income abroad. In the case of permanent residents, the estimated percentage is 5% of their income, for holders of annual permits 14%, and for holders of the short-term permits 25%. Total workers' remittances are the sum of these three components.

The advantage of the SNB's method is that it records financial transfers which have been sent via both formal and informal channels. What is more, the estimates take account of financial and non-financial (in-kind) workers' remittances as well as capital transfers effected by immigrants who subsequently leave the country. However, the accuracy of the estimates obviously depends on how precise the assumptions regarding household remittance behavior are. At present, these assumptions have not been verified and updated for a considerable length of time. Nevertheless, evidence suggests that they may still be sufficiently reliable.

In a recent study, JIMÉNEZ-MARTIN, JORGENSEN and LABEAGA (2007) estimate workers' remittance flows (through both formal and informal channels) from the 27 EU countries to all relevant remittance-receiving countries. Using their own average disposable income estimates and data on observable remittance flows per destination country and country of origin, they find that immigrants in the EU remit 10.6% of their disposable inco-

6 This data is published in the Swiss Federal Statistical Office's Employment Statistics (ES) and the Structural Earnings Survey (LSE).

me on average. Since it is not possible to compile official remittance data for all origin/destination country pairings, the authors also estimate remittance propensity using an econometric model. The average predicted propensity to remit equates to 8%. Immigrants in Germany and Austria remit 6–8% and 11–12% of their disposable income respectively. Given that the assumed average propensity to remit is 8–9% in the case of immigrants in Switzerland, the study by JIMÉNEZ-MARTIN JORGENSEN and LABEAGA (2007) supports the SNB's corresponding assumptions.

Direct evidence from Swiss household surveys suggests, however, that the SNB's estimates with regard to migrant household remittance propensity may be too high. Based on data from the Swiss Federal Statistical Office's household budget survey for 2002–2004, HAUG and TEOTINO (2007) examine personal transfers from Switzerland to foreign countries. Based on roughly 1,500 observations of foreign households (households with permanent residency or annual permits only), they find that the observed remittance propensity was 0.6% for these households. However, as the authors argue, this figure includes monetary outflows only. If non-monetary outflows are also taken into account (as in the case of the SNB calculation), the authors' estimates of remittance propensity increases to 3%. This figure is substantially lower than the corresponding SNB estimates of 5% to 14%. However, one major caveat applies to HAUG and TEOTINO's data: the underlying household budget survey does not include immigrants with no knowledge of German, French or Italian. As these immigrants may be more likely to remit, HAUG and TEOTINO (2007) may be underestimating the true propensity to remit.

4 Destinations of Remittance Outflows from Switzerland

In contrast to other major source countries (US, Saudi Arabia, Russia), only a minor share of remittances from Switzerland flows to low-income countries. The fact that over 80% of remittance outflows from Switzerland are payments to cross-border commuters implies that the majority of remittances are made to high-income European countries. Moreover, foreign population statistics suggest that the major share of remittances by immigrant workers also flows to high-income countries.

SNB calculations show that the majority of payments to non-resident foreign workers flows to Frauce. In 2005, French cross-border commuters earned CHF 5.8 billion, which is 54% of total cross-border commuter compensa-

tion. Italian cross-border commuters earned a further CHF 2.4 billion (23%), while their German counterparts earned CHF 2.1 billion (20%). The geographical allocation of cross-border commuter compensation has been quite constant over time.

Table 1: Foreign population statistics and remittance outflows by destination, 2006

	Resident immigrants	Permanent residents	Annual permit	Short-term permit	Estimated remittances	
					CHF million	(% of GDP)
Total	1,583,678	1'081'179	402,911	99,588	4,200	
Italy	295,679	268,612	20,111	6,956	514	0.02
Germany	194,695	90,429	69,107	35,159	692	0.02
Serbia*	190,926	153,093	37,656	177	416	1.07
Portugal	185,638	122,935	38,461	24,242	516	0.22
France	76,680	44,047	23,880	8,753	238	0.01
Turkey	73,949	61,123	12,689	137	154	0.03
Spain	69,032	62,678	4,852	1,502	123	0.01
Macedonia	60,163	50,337	9,792	34	123	1.62
Bosnia	41,273	33,777	7,475	21	87	0.63
Croatia	39,171	34,195	4,904	72	75	0.14

*Population figures for Serbia include roughly 100,000 Kosovo Albanians.

Source: Federal Office for Migration (FOM), Swiss National Bank, World development indicators (GDP).

No official data is available for Switzerland regarding the destinations of remittances by resident immigrant workers. We therefore use Swiss foreign population statistics to provide a rough estimate of the geographical allocation of remittances.[7] Table 1 shows the estimated volume of remittances for each of the top ten countries of immigrant origin. Interestingly, the table suggests that the major destinations of remittances by resident immigrant workers in Switzerland are other European high-income countries (Germany, Portugal, Italy, France and Spain account for slightly more than half of remittances). The countries of former Yugoslavia (Bosnia, Croatia, Macedonia, and Serbia) represent another important destination, with an estimated total remittance volume of CHF 700 million on the part of immi-

7 For example "workers' remittances" by permanent residents accounted for CHF 1.54 billion in 2006. In the same year, Serbians made up 14.2% of the total permanent resident immigrant population. This would suggest that remittances by Serbian permanent residents in Switzerland accounted for CHF 218 million in 2006. If the same approach is applied to holders of annual and short-term permits, the total Serbian workers' remittance figure is CHF 415 million.

grant workers. However, despite their low level of economic development, remittances from Switzerland only make a small contribution to GDP in these countries. For example, remittances from Switzerland correspond to an estimated 1.07% of GDP in Serbia and 1.6% of GDP in Macedonia.

How accurate is our estimate of remittance destinations? Three recent studies on remittance flows to Serbia allow us to measure the accuracy of our estimate for this country at least. A recent study by the State Secretariat for Economic Affairs SECO (2007) provides information on remittances sent from Switzerland to Serbia, while the De Luna Martinez, Endo and Barberis (2006) and Jiménez-Martin Jorgensen and Labeaga (2007) studies contain data on the volume of remittances sent from Germany to Serbia. If we assume that Serbians in Switzerland share the same remittance behavior as Serbians in Germany, then data from both the De Luna Martinez, Endo and Barberis (2006) and Jiménez-Martin Jorgensen and Labeaga (2007) studies would suggest that Serbians in Switzerland remit roughly CHF 195 million per year. The figure in Table 1 shows that our calculations estimate more than twice this amount. What is more, our calculations and estimates based on data from Germany are in marked contrast to the SECO survey, according to which Serbian immigrants in Switzerland sent approximately CHF 60 million each year to Serbia. A reason for this discrepancy could be the fact that the SECO study does not take Kosovo Albanians into account (who make up half the official Serbian immigrant population in 2006), while the opposite might be the case with regard to the other two studies. Furthermore, the survey sample in the SECO study is regarded as unrepresentative of all Serbian households which have links to Switzerland.[8]

The above comparison suggests that our estimate of the geographical allocation of remittance outflows from Switzerland may not be very accurate. What are the possible reasons for this? First, we use average income data and therefore we implicitly assumed that wages and employment rates are equal across immigrant nationalities. Such an assumption is by no means realistic. By contrast, it is highly likely that the average wage of Serbian immigrants in Switzerland is below the average wage earned by other nationalities. It is also realistic to assume that the rate of employment among Serbians is lower than the average employment rate for all immigrants. For

8 Data from households in urban areas in Serbia is not included in the sample. Furthermore, it is not possible to estimate the actual size of the Serbian sub-population as part of the broader community of citizens from Serbia-Montenegro who reside in Switzerland. According to SECO, the results of the survey therefore "cannot be considered statistically representative of the Serbian community".

these two reasons Table 1 may overestimate the true amount of remittances by Serbians. On the other hand, it is possible that Serbians send a higher proportion of their income home than the average immigrant, as they may have more dependents in their home country than is the case, for example, with regard to immigrants from higher-income countries. In view of this, it is not obvious whether our calculation underestimates or overestimates the true volume of remittances by Serbian immigrants in Switzerland.

5 Conclusion

According to IMF statistics, Switzerland is the third largest source of remittance income worldwide. The reason for this is that the IMF definition of remittances covers compensation for non-resident cross-border commuters. Switzerland has the world's largest outflow of cross-border commuter wages (USD 10 billion per year). Remittances by resident immigrants in Switzerland are less significant in an international context – totalling just over USD 3 billion in 2005, the seventh largest volume figure worldwide.

In contrast to other major source countries (US, Saudi Arabia, Russia), only a minor share of remittances from Switzerland flows to low-income countries. The fact that payments to cross-border commuters account for over 80% of remittance outflows from Switzerland implies that most remittances are made to high-income European countries. What is more, rough estimates suggest that two-thirds of remittances by immigrant workers also flow to high-income countries. This would suggest that the development impact of remittance outflows from Switzerland is negligible compared to other major source countries.

In Switzerland, remittances by foreign workers are estimated on the basis of statistics on the employment of foreign workers, average wages and assumptions regarding remittance behavior. In contrast to estimates based on actual cross-border financial transactions, this approach is advantageous in that it also records informal transfers. The disadvantage of the approach is that assumptions regarding the propensity to remit have not been verified for long. However, available evidence suggests that the SNB's assumptions on the proportion of the income transferred abroad are still reasonably accurate.

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