When Cards and ATM's are the only choice: A fortnight in Cyprus with no banking system, nor trust

Efthymiou, Leonidas and Michael, Sophia

intercollege-larnaca, intercollege-larnaca

June 2013

When Cards and ATM's are the only choice:
A fortnight in Cyprus with no banking system, nor trust

Efthymiou, L. and Michael, S.

Abstract

The aim of this article is to offer some insights into the remarkable happenings that occurred in Cyprus during a two-week period (15 March – 28 March 2013) when the country was left with no banking system, subsisting solely on ATMs and cards. At the same time, we aim to provide some new perceptions into the role of ATMs, POSs and credit cards in critical economic situations where a bank run, bank insolvency, or bail-in are likely to happen. We adopt a 'procedural approach' and use the *sequence of events* method towards building up a 'timeline analysis'. Our discussion suggests that for a number of reasons, the Cypriot bail-in case has breached the confidence of unsecured and secured depositors and investors on a global scale. Also, we suggest that during the preparations of the *supposedly* unexpected bail-in, which Cypriot MPs firstly rejected and then accepted the Eurogroup and IMF proposal, ATMs, POSs and credit cards have played a *pre-arranged* role, securing a controlled circulation of money and transactions with restrictions.

Keywords: ATMs, Levy, bank-run, informal economy, cashless society, Cyprus

Introduction

On 15 March 2013, the Cypriot Economy was on the verge of disorderly bankruptcy. This day was the beginning of what afterwards was recorded as the longest shutdown of a country's banking system in history. Grounded within a theoretical and empirical body of exploring the development of electronic payments; rapid advances in automation systems; and elements of a cashless society, this article communicates the critical situation of a European country with no banking system for a fortnight, and depicts a life moving on solely on Automated Teller Machines (ATM's) and Point of Sale (POS) terminals. The discussion also lies within a wider and accumulating body of literature on major bank failures, economic crashes and organisational legitimacy that stem from The Great Depression of the 1930s. We adopt a 'sociotropic' stand, towards reflecting the normative implications of the Cyprus deal (Suchman, 1995). Within this framework, we aim to evaluate the outputs and consequences as well as techniques and procedures underpinning the Cyprus case. To avoid a sprint over old ground, in both areas the review is selective, not exhaustive.

In context, Cyprus is a small economy (0.2% of euro area GDP). The country joined the euro zone and introduced the euro on 1st January 2008. The assessment of the European Commission and the European Central Bank (ECB) back in 2007 found no problems with the Cypriot banking sector and confirmed the country's suitability for Eurozone membership. Five years later, on 15 March 2013, Cyprus was insolvent. For the record, at the end of 2007, the value of Cyprus pounds in circulation was around 635 million, from which £590 million in banknotes[1] and £45 million in coins[2]. To support the changeover from Cyprus Pounds to Euros, 79 million euro banknotes of all denominations and 395 million euro coins were injected into the country prior to the new year's day of 2008.

The free movement of people and goods within the EU implies inflows and outflows of cash in a continuous migration flow that cannot be measured accurately. Therefore, determining the actual value of banknotes in circulation in each EU country is difficult. But according to the Central Bank of Cyprus (CBoB), at the end of 2012 the value of Euros was €778,645,730 in banknotes and €95,109,592,79 in coins.

Some interesting statistics about the Cypriot economy one day before the collapse (14 March, 2013) are the following: The Cypriot banking system was comprised by 136 Monetary Financial Institutions (MFIs), including the Central Bank of Cyprus (CBC), commercial banks, Co-operative Credit Institutions (CCIs) and electronic money institutions.[3] Customers were served through 771 bank branches providing cash services island-wide[4]. The domestically owned credit institutions accounted for 60% of total banking system assets. Excluding the Central Bank of Cyprus, the sum of deposits in the Cypriot banking system as of February 2013 was €67,468 billion[5] (Table 1); almost 8 times the country's annual Gross Domestic Product (GDP) of €17,887 for 2012[6]. On March 15, when the Cypriot banking system shut, half of all bank deposits were sitting with the two biggest banks, namely, Bank of Cyprus and Cyprus Popular Bank (Laiki).

Table 1		Domestic residents	Other euro area residents	Residents of rest of the world	Total
Outstanding amounts (billion)					
2006	Dec.	27,400.7	1,147.8	14,550.6	43,099.0
2007	Dec.	32,294.2	1,390.4	18,829.4	52,514.0
2008	Dec.	39,461.8	1,090.6	15,456.8	56,009.3
2009	Dec.	41,011.6	1,290.7	15,852.7	58,154.9
2010	Dec.	45,379.3	4,035.3	20,525.2	69,939.7
2011	Dec.	43,747.9	5,355.4	20,194.2	69,297.6
2012	Dec.	43,316.8	5,322.6	21,518.0	70,157.4
2013	Jan.	42,789.6	4,748.3	20,882.9	68,420.8

(Table 1 - Source: Monetary and Financial Statistics, Statistics Department, Central Bank of Cyprus[7])

Also, Automated Teller Machines (ATM's) and Point of Sale (POS) terminals were popular among Cypriots as they were among international visitors. The first ATMs were introduced by the 'Bank of Cyprus' in 1976, followed by the second biggest institution 'Cyprus Popular Bank' in 1989. Since then, the increase and popularity of ATMs has been substantial. As we present in Table 2, the total number of ATMs as of 15 March 2013 was 698, recording a 90% increase within a decade. Identically, the number of POS terminals in 2013 was 22,922, recording an 86% increase since 2003.

Table 2	The Growth of POSs and ATMs in Cyprus	
Year	**# of POS's**	**# of ATM's**
2001	n/a	311
2002	n/a	355
2003	12,267	367
2004	13,462	415
2005	16,028	444
2006	16,834	524
2007	18,210	556
2008	20,862	611
2009	21,459	669
2010	22,392	674
2011	22,687	698
2012	22,922	698

(Source: Data kindly provided by CBoC and JCC Payment Systems Ltd, Cyprus, Nicosia)

Not surprisingly, digital banking services were also popular among Cypriot consumers[1]. As we present in Table 3, data accumulated from the four main banks in Cyprus demonstrate a significant growth of mobile and internet banking since their launch.

The growth of Internet and Mobile Banking in Cyprus since their launch				
Bank	**Year internet banking was launched**	**Increase in usage since launch**	**Year Mobile banking was launched**	**Increase in usage since launch**
Bank of Cyprus	**2000**	**30%**	**2010** **June 2012 (I-phone and Android apps were launched)**	**350%** **250% (within one year)**
Cooperative Central Bank	**2008**	**500%**	**Will soon be launched**	**-**
Alpha Bank	**2005**	**50%**	**2009**	**50%**
Hellenic Bank	**2002**	**15%**	**2011**	**1%**

***Table 3: Data accumulated through telephonic interviews*[8]**

The Bank of Cyprus (BOC) was the first bank which introduced internet and mobile banking to its customers. BOC launched both services in 2000 simultaneously, as a WAP (Wireless Application Protocol) service, but the use was extremely low for ten whole years. In fact, only 1 to 2 % of its total subscribers were using this service. This is attributable to the low number of mobile phones subscribed to the internet. Also, according to BOC officials, the service was not user friendly to customers.

However, a revised strategy on mobile and internet banking in 2010 lead to a remarkable growth on usage. In November 2010, the new Mobile Banking service (‘mobi.1bank.com’) was launched to provide an enhanced and more convenient service to customers. This

[1] A survey by the Statistical Service of the Republic of Cyprus in the first quarter of 2012, showed that almost 30% of the 584,863 internet users in Cyprus (representing 52.2% of the population) used mobile or smart phones to access the internet away from home or work while 25,9% used a laptop, notebook or netbook.

innovation lead to an increase of 350% on usage within a year (Table 3). In June 2012, a complete I-phone and android application was launched. This innovation has lead to a further 250% increase on usage until today.

Internet banking usage has also increased since its launch. In 2012, there were 100,000 '1bank'[9] subscribers at the Bank of Cyprus, recording an increase of 14% compared to 2011. Alpha Bank launched its mobile banking service in 2009, and has seen a 50% increase in usage by its customers. The Cooperative Central Bank, has had a striking 500% increase in its Internet banking usage since it was launched in 2008. This bank is also in the process of designing its own I-phone and Android mobile application in order to further enhance its services to its customers[10].

Our research across the four main banks in Cyprus also aimed at examining the effect of internet and mobile banking on the use of ATM machines. The findings revealed that even though the use of internet/mobile banking has increased, the use of ATM machines has not been affected. Specifically, the Hellenic Bank's Group Webmaster stated that there has not been a decrease in the use of ATM's and that mobile/internet usage actually adds value to the use of ATM's. This is because customers still need to use ATM's to withdraw or deposit money for payments (either digital or face to face) and can do so at any time they want, without stepping inside the bank. Therefore both ATM's and mobile/internet banking serve the same purpose, that is, convenience and a faster service to customers. Also, the Marketing Manager of the Bank of Cyprus mentioned that the use of ATM's has not been affected negatively since most customers mainly use ATM's to withdraw cash, something which their 1-Bank digital service cannot provide.

Whilst we present these statistical findings for consideration, an account on the Cypriot economy could not be accurate without a reference to the island's tourism industry. For the period between January and December 2012, revenue from tourism was estimated to 1.9 billion (exact figure: €1.927,7 million), which is 11.3% of the annual GDP. The contribution of tourism to GDP, nevertheless, is significantly greater than this value, as a number of sectors such as transport, entertainment and retail are benefiting, making tourism the most important industry in Cyprus. The impact of Tourism is also reflected in the use of ATM's and POS's. Indicatively, we present below the value of card payments by locals and tourists, where the value of tourist payments for both 2011 and 2012 is circa 20% of all payments at the POS's.

Statistical data on card use by Cypriots and Tourists in Cyprus and abroad		
Table 4	**2011**	**2012**
Payments of Cypriot card holders to local merchants	**€2,205,535,632** (# of transactions: 29,883,678)	**€2,265,269,362** (# of transactions: 31,620,428)
Payments and Withdrawals of Cypriot card holders abroad	**€1,284,903,167** (# of transactions: 9,404,922)	**€1,404,422,783** (# of transactions: 10,216,335)
Payments of tourists to local merchants	**€473,167,413** (# of transactions: 4,221,082)	**€532,628,986** (# of transactions: 4,845,492)
(Source: Data kindly provided by JCC Payment Systems Ltd, Cyprus, Nicosia)		

Moreover, to show how the key events, activities, patterns and changes were unfolding over the critical two week period, the collection, presentation and analysis of data employs a 'procedural approach'[11]. This involved a systematic gathering of documents as sources of data, including acts of parliament, banks' official proceedings, government key announcements, mass media outputs[2], organizational reports, and material collected through interviews and field notes. The *sequence of events* method was used throughout the research process towards building up a 'timeline analysis'. The first part of this analysis is a date by date order timeline, spanning from 15 March to 28 March 2013 – the period during which the Cypriot banking system remained shut. The use of a timeline, as it appears in the following section, aims to convey key events and illustrate their unfolding sense-making. In the discussion, we examine the varied implications of the Cyprus episode on a number of

[2] According to Byman and Bell (2011) the credibility of mass media outputs is frequently an issue. To minimize this concern, a wide range of media was employed to verify particular events and news.

stakeholder groups, including central banks, retail banks, consumers, individual citizens, and the government.

The Fortnight's Timeline

Friday, 15 March, 2013. The president of Cyprus arrives in Brussels to attend a Eurogroup summit on Cyprus, together with the top administration of the International Monetary Fund (IMF), the European Central Bank (ECB), and the Eurozone's Finance Ministers. The negotiators and the Cypriot government have already agreed on a preliminary 'memorandum of understanding' that includes the granting of a financial bailout estimated at €17 billion. On March 15, however, the conditions of the bailout are unclear to the people of Cyprus.

By the first morning hours of **Saturday the 16th**, surprising and shocking news spreads throughout Cyprus. The island's residents wake up to shockingly discover that all bank accounts across the island have been frozen on quick freeze mode, literally while they were sleeping. After ten hours of late night talks and difficult negotiations in Brussels, president Anastasiades strikes a 10 billion bailout deal with the Eurozone members and the IMF on one condition - that a one-off levy of up to 10% on all savings is imposed[12].

Naturally, this is both an unexpected and shocking announcement. Fear, confusion and uncertainty spreads throughout the island as the residents realise that their savings will have to go through a levy. The president defends the decision as a "painful" step which has to be taken in order to avoid a catastrophic bankruptcy. 'Much more money could have been lost in a bankruptcy of the banking system or indeed of the country,'[13] he states to the public.

The bailout levy means that[14]:

- Depositors with under 100,000 euros deposited will have to pay 6.75% across the entire banking sector
- Those with more than 100,000 in their accounts will have to pay 9.9%
- Depositors will be compensated with the equivalent amount in shares of the two largest Cypriot banks
- The levy will be a one-off measure

However, as the bailout levy has to be approved by parliament members before taking effect, the Cypriot banking system has to come to a standstill. To avoid a sharp destabilization of the banking sector, all banks shut their doors. For the first time in the history of the Eurozone, a nationwide banking system shuts with the frightening possibility to bankrupt wildly. All electronic transactions and money transfers freeze, except credit cards and ATMs. The movement of capital in the form of cheque payments and deposits, withdrawal slips, and bank transfers are postponed until further notice. Premature terminations of time deposits are barred and compulsory reprogramming of maturing time deposits is imposed. Electronic banking platforms generate a fixed message for their users: ‘this service is temporarily unavailable’. Mobile banking is also suspended. Subscribers can log in to their accounts to view their balances, but cannot carry out any transactions. Astonishingly, a reserved amount of 6.75% is already in place on all deposits under €100.000 and a 9.9% on all deposits in excess of €100.000 on all accounts across the entire Cypriot banking system.

Similar bank closures have been recorded in the past in the US (1933) and Argentina (2002). In the US case, Washington Governor Clarence Martin closed all Washington State banks and declared a three-day “bank holiday”, which was later extended by the newly elected President Roosevelt to eight days. During this period, the public did not have access to banking services, but had to rely on the cash that had been withdrawn prior to the shutdown. Drew Powers, in his article: *The Banking Crisis of 1933: Seattle’s Survival during the Great Depression Bank Closures* states: ***The banking system was unable to keep up with the panicked withdrawals that customers were making from their bank accounts, rendering banks incapable of providing money many customers had deposited.***[15]**.** During the bank closure, Roosevelt managed to pass a new legislation – the Emergency Banking Act – which offered deposit insurance to savers when the banks reopened.

In the case of Argentina, the reasons behind its bank closure were slightly different. The country declared itself bankrupt in December 2001, naturally causing widespread panic among its people. The collapse occurred in two phases. The first phase happened when the government announced it could not pay back the $93 billion it had borrowed. Consequently, Argentine businessmen began to withdraw their savings in pesos and exchanged them for US dollars, fearing that the Peso was going to depreciate further and that inflation was going to rise. As a result of the bank run, the government took emergency measures. All bank accounts were frozen, overseas capital transfers were forbidden and cash withdrawals were limited, initially to $250 per month and later to $300 from accounts denominated in pesos. In addition, no withdrawals were allowed from accounts in US dollars, unless the owner agreed to convert them in pesos. *Tens of thousands of desperate citizens stormed the banks, and many spent nights sleeping in front of the automated* teller machines.[16]

Malamud also states '[t]*he enforcement of the new measures caused delays and problems for the general population...* [and] *massive queues at banks and ATMs'.* It was in April 2002 however, when the nation's banks closed for ten days. The government '*had halted all banking and foreign exchange transactions, to stem the growing tide of money being withdrawn from the crippled banking system'.* In fact, The Argentine banking system had lost 10% of its deposits since the first phase of the collapse.[17]

Monday, 18th March, 2013. The Central Bank of Cyprus announces that banks will remain closed. March 19 and March 20 are declared bank holidays. Clearly, the banking system could not have opened without knowing how much the cut of the deposits would eventually be. The previous night, Sunday 17, the Central Bank had informed commercial banks that the levy percentages had changed. For deposits up to €100,000 the levy would be 3 per cent, between €100,000 and €500,000 10 per cent and above €500,000 12.5 per cent.[18] As part of the agreement, an announcement by the Ministry of Finance states that shares of banking institutions will be recapitalized and offered to depositors[19].

Shortly after the announcement, long queues begin to form in front of the cash machines as life can only carry on through two particular means. People can sustain themselves only by queuing at the long lines of ATMs to withdraw cash, or stay cashless and use their credit cards. In spite of the banks being closed, ATMs are stocked up with cash for people wanting to make withdrawals. The Central Bank's instruction to the banks is to keep re-supplying the ATMs with money several times over the long weekend. The withdrawal limit at the Cyprus Popular bank is €800 per day and at the Hellenic Bank €1000. Apart from the economic necessity and for the country's continued existence, this could also serve as a psychological stimulus for citizens.

Within hours, most branches have no more money and have to ask for extra cash from the Central Bank. In an announcement issued on this day, the Association of Cyprus Banks spokesman said that “in cooperation with the Central Bank of Cyprus, banks are making every effort to ensure that the increased needs of cash among the public will be continuously satisfied through the ATMs” (cited in Christou, Cyprus Mail, 18/03/2013).

On the same day, a number of countries issue travel advice for Cyprus, prompting their nationals traveling to Cyprus to take different forms of payment, such as euros, and credit/debit cards. ‘ATMs, debit and credit cards can be used as normal however, while banks are closed, we advise taking sufficient euros to cover the duration of your stay, alongside appropriate security precautions against theft’.[20] In addition, the British Foreign and Commonwealth Office Travel advise British nationals receiving pension payments in Cyprus bank accounts to contact the International Pension Centre. ‘UK forces pensioners that have payments made to a Cyprus bank account are currently suspended by City Bank (payments are via City Bank in the UK for onward payment to Cyprus). City Bank has suspended all payments to Cyprus accounts until the situation becomes clearer’.[21]

March 19. Tuesday Evening. The Cyprus House of Representatives reject the horizontal levy proposal, putting the whole project of austerity across Europe at risk. This comes as a surprise to members of the IMF and Eurogroup and some even consider the rejection risky, given the fact that the country is on the verge of bankruptcy and limited options are available to save the banks from collapsing. The negotiations are turning towards a dead end and the deal is in serious jeopardy.

On the same day, the United Kingdom sends 1m euros (£850,000) to Cyprus as a "contingency measure" to provide British military personnel with emergency loans in case cash machines and debit cards stop working. At the same time, the British Ministry of Defence (MoD) begins approaching their personnel, asking if they want their March, and future months' wages, paid into UK bank accounts, rather than Cypriot accounts[22].

Thursday, 21st March. Cyprus is already with no banking system for 5 days. The central bank announces that banks will remain closed for at least another five days. It is not clear for how much longer credit cards will be functioning in the country but at this time, ATMs’ cash and credit cards are the only remaining methods of transacting. The Popular Bank has limited cash withdrawals from ATM machines to just €260 per day. The withdrawal limit at the Hellenic Bank remains at €1000 per day. The Emergency Liquidity Assistance (ELA) also announces that it can no longer support the Cypriot banking system.

At the centre of the crisis in Nicosia, all roads leading to the House of Parliament and the presidential palace are blocked by police road blocks. Media reports state that the Popular Bank, the island's second biggest lender, will be closing down, which causes a rush by customers at ATM's. At the same time, hundreds of the bank's employees try to charge at the parliament resulting in small-scale scuffles with the police. While the Cypriot Financial Minister is in Moscow for discussions, rumours support that the employees of Popular Bank have received layoff letters; Cyprus Central Bank officials are in Moscow discussing possible alternatives; and the Central Bank formulates capital controls for the first time in the Eurozone. Oxymoronically, some media are still advertising Popular Bank's and Bank of Cyprus' saving promotional deals, with an escalating or fixed interest rate of up to 5.25%.

March 22. Long queues have formed at almost every one of the bank's ATMs island wide. The reason why people rush to their nearest ATM is twofold. The first reason is a common feature in occasions of extreme crisis, that is, people want to withdraw as much money as they can fearing that the banks are insolvent and, levy or not, they will be unable to withdraw their deposits[23]. Furthermore, under the fear of losing their money, most retailers and traders begin refusing card transactions. Clearly, every card transaction directs the retailers' money into a bank account. With a bank system under the threat of bankruptcy, or levy as the best option, most retailers prefer to turn down customers rather than accept their cards. At this point, it seems that citizens have only one option left, that is, to stand in the long line of an ATM.

But the Central Bank officials and a number of governmental representatives insist otherwise. Their advice is that retailers and traders should keep receiving cards as usual. At the same time, they deny all reports and rumours circulating in the media about the default of Popular Bank. Also, a legal framework is set by parliament that night, placing capital controls to avoid a sharp destabilization of the banking sector and the Cypriot economy as a whole.

In the retail sector, small shops and supermarket stores cannot restock as suppliers can only accept cash. The chairman of the Small Shopkeepers Union (POVEK), Stefanos Koursari said that it was unfair for businesses to ask for cash payments at a time when there was a shortage of cash. ***"The only way that people can get cash is via ATM machines. There is a chain reaction going on. We must all keep calm and not make financial gain from a crisis situation. We must realise the magnitude of this problem and join together"*** (Koursari, cited in Cyprus Mail, 22/03/2013).

Following the extended bank closure, the British Government reissues travel advice for Cyprus. '*The Government of Cyprus has announced an extended bank closure. ATMs, debit and credit cards can be used as normal however, while banks are closed, we advise taking sufficient euros to cover the duration of your stay, alongside appropriate security precautions against theft*'.[24]

Saturday, March 23. The chairman of the Petrol Owners Association warns that petrol is running out. Petrol-station owners do not have cash to refill their reserves. Payment cheques and petrol resupplies on credit are not an option. In fact, while people without a credit card are running out of cash, petrol stations start demanding cash payments for fuel. Members of the society that do not have cards encounter problems and are left with no money.

March 24. The Central Bank reduces the withdrawals from Popular Bank ATMs to a daily maximum of €100. For the Bank of Cyprus, ATMs withdrawal limit is €120. The withdrawal limit at the Hellenic Bank remains at €1000 per day. These limits are expected to remain until the banks reopen or until confirmation of the continued emergency funding from the Emergency Liquidity Assistance (ELA).

Monday, March 25. A last minute agreement is reached at the Eurogroup between Cyprus, the heads of the European Commission, the ECB and the IMF. The agreement is reached just a few hours before the expiration of an earlier ECB deadline to discontinue liquidity assistance to Cypriot banks via the Emergency Liquidity Assistance (ELA) facility[25]. As per the official agreements, the Cyprus Popular Bank automatically becomes subject to immediate resolution. Also:

- All insured deposits in all banks (i.e., deposits below €100k) remain fully protected in accordance with the relevant EU legislation.
- All deposits in excess of €100K at the Cyprus Popular Bank are confiscated.
- All deposits in excess of €100K at the Bank of Cyprus (BOC) will go through a levy of 37.5 percent.

The deal also commits Cyprus to restructure the banking sector through the creation of the Cyprus Asset Management Company that will take over the bad loans from the banks from Greece and Cyprus.

Tuesday, March 26. The banks remain closed. Customers' ATM receipts have stopped showing the *actual* 'available balance'. They show a 'reserved balance' instead, and an available amount of no more than €100. A customer's receipt is shown on TV, inscribing the following message:
Reserved Balance: €1320.00
Available Balance: €100.00

The Hellenic Bank maximum limit remains at €1000 per day. For the Bank of Cyprus and the Popular Bank the limit is €100 per day.

Wednesday, March 27. Companies selling safes receive an increase in calls asking for information, as people prepare to stash their cash at home. According to Gregoriou (Cyprus Mail, 28/03/2013), people were asking about the size of safes, the cost and the level of safety that each type of safe provides.

Thursday, March 28. After almost two weeks with the system running solely on cards and ATMs, banks across the country are *ready* to open their doors at 12 o'clock (1000 hours UK time). Temporary capital controls are in place for the first time in the Eurozone, restricting cash withdrawals per person per bank per day at €300, and controlling cash outflows from the country. The airports' controls raise signs notifying that the maximum allowance is only

€1,000 (£845) per person per journey abroad. According to the Guardian, bags are reportedly being searched, too.[26]

Precautionarily, 5 billion euro banknotes arrive to Cyprus from the European Central Bank before the opening of banks. These banknotes were stored in Bundesbank, Germany and the measure aims to prevent commercial banks from running out of cash. In addition, the European Commission produces a written statement, supporting that the temporary restrictions on free capital movement in Cyprus are necessary 'to prevent the significant risk of uncontrollable outflow of deposits which would lead to the collapse of the credit institutions and to the immediate risk of complete destabilisation of the financial system of Cyprus'.[27]

On the whole, Cyprus has made a negative mark in history, being the first country in the world to have its banking system shut down for the longest number of consecutive days (13 days: March 16th-28th), beating Argentina (10 days: April 20-29th, 2002) and the U.S (8 days: March 6-13th, 1933). There is a major striking similarity between each country's bank closures, that is, to prevent a bank run on deposits during a financial crisis period.

In all cases, people faced a shortage of banknotes and coins. Argentina, for instance, suffered such a shortage of banknotes that the government and some businesses decided to use self-issued bond and coupons to make up for the scarce currency[28]. Similarly in Cyprus, coins became scarce, salaries and rents could not be paid, people could not buy newspapers, taxi drivers were setting fares in five and ten-euro denominations to avoid having to use coins[29], pharmacy stores were close to facing a shortage of supplies and some businesses postponed their operation until the banks opened.

Of great importance is that many savers in Argentina managed to win court cases against the government for imposing restrictions on withdrawals. In Cyprus, local and foreign savers and investors who have lost their deposits and bonds are currently in the process of filing lawsuits against the Cypriot government and Central Bank of Cyprus.[30] The question is, will they be equally successful?

Discussion

We believe that the restructuring of the Cypriot banking sector would contribute to its long-term stability, regulation, supervision and restore its transparency. However, due to the levy, the case of the Cyprus Bailout is a striking and controversial phenomenon that influenced several stakeholder groups both in Cyprus and the peripheral euro area. But as several commentators were quick to point out, this is not a new 'policy doctrine' and Cyprus is just a special case. We believe too that Cyprus is a special case for two main reasons. First, the involvement of depositors in deleveraging indebted banks depends on a variety of financial, political and legal forces. For instance, the very large share of foreign depositors in Cypriot banks; in combination with banks' exposure towards Greece (estimated at around €25 billion[31]); and a number of euro-wide political implications (such as the opposition of German Social Democratic Party; Greens; and German government coalition parties in lending funds to Cyprus) have made the Cypriot levy an option.

Second, the small size of the Cypriot economy, which is the third smallest in the euro area (0.2% of euro area GDP), was unlikely to cause systemic repercussions for the rest of the Eurozone. Evidently, the markets behaved as though this crisis is a uniquely Cypriot micro failure.[32] It is therefore debatable whether a similar bail-in approach could be attempted for a large economy, such as Spain's.

Following this line of argument, although the concerns about the health of other fragile economies in the rest of Eurozone are increasing (Slovenia and Spain seen as next most likely[33]), the case of Cyprus does not necessarily constitute a bail-in template on a Euro-wide scale. However, as we explain below, it does constitute an uncomfortable precedent, leading to another crisis of confidence, trust and organisational legitimacy.

Crisis of legitimacy, confidence and trust

Taken overall, we also believe that the Cyprus deal has brought the European banking crisis to a new level.[34] To begin with, it is now proved that the fiscal austerity across Europe may hold a very aggressive stance. Prior confirming statements by European political leaders, European Commission officials and central bankers stating that, after the unique and exceptional case of Greece, there would not be any further private sector involvement and that unsecured bank creditors would be safe have collapsed overnight.[35]

Most importantly, however, the Cypriot case is a lesson about how particular institutional stakeholders, such as central bankers, the Eurogroup, and IMF, should behave or manage a subsequent crisis. Simple lessons of crisis management and competence, we would say. Let us put it this way, how easy is it for investors, creditors and depositors to forget the first agreement (dated 16 March 2013) between the Cypriot President, the Eurogroup and the IMF, voiding the European Union's previous guarantee on deposits up to €100,000? The fragile confidence and trust in the banking system that bankers and policymakers worked hard to cultivate immediately after the colossal collapse of Lehman Brothers in 2008 has given its place to nervousness. The widely maintained hypothesis of protected deposits has officially failed through a celebrating institutional weakness, sidelining the largest stakeholder group, namely, retail-bank customers. Intuitively, one would expect that Europeans, and primarily the depositors in other peripheral Euro countries like Spain, Greece and Italy, have lost their trust in banks, which begs the question: 'will depositors pre-cautiously withdraw their money?' Will Cyprus become a slippery slope?

What is more, during and after the negotiations, the EU's inconsistent rhetoric, contradictory arguments and lack of transparency prevailed, disregarding and downplaying the wider financial interests and social context. For example, while the events were unfolding Jeroen Dijsselbloemto, the Dutch head of the Eurogroup of finance ministers, suggested that the Cyprus deal may serve as a template for future rescues. After hours of falling share prices, he retracted, stating that 'Cyprus is a specific case with exceptional challenges'[36]. Then, on March 26th, ECB Executive Board member Benoit Coeure insisted that Cyprus is a unique case and the rescue plan used should not be seen as a model for other troubled European countries[37]. A few days later, on March 31st, the German Finance Minister Wolfgang Schaeuble stated that savings accounts in the euro zone were safe, adding that Cyprus was indeed a special case[38]. A month later, April 23rd, the Cypriot president told EU parliamentarians that despite assurances that Cyprus was a special case, imposing levies on bank's depositors may be used in other countries as well[39]. How oxymoronic is this? On the one hand, business schools and professional bodies advocate how instability, inconsistency, insecurity, uncertainty and risk pose immediate threats to capitalism's free market economy, and on the other hand, top level institutionalised efforts undermine the economy's foundations. With this, of course, we do not make a claim of what is best for the world of money and finance, or how things should be done. On the contrary, this kind of ambiguity creates more suspicions about the credibility and viability of a free market, its policy makers and institutions.

Furthermore, with the final levy agreement (dated 25/03/2013) insured depositors will not face losses. However, once again the deal undermines financial stability. With this agreement, the two largest Cypriot banks defaulted over their bonds; uninsured depositors suffered big losses; stockholders were cleaned out; and bondholders were bailed in. It constitutes a precedent of an alarming change in the rules of market finance. Ironically, it was one such bail-in (the restructuring of Greek government debt) that led to the problems faced by the Cypriot banks, which were big holders of Greek bonds.[40]

Other than legislative quietism, this kind of behaviour and actions raise issues of legitimacy. 'Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (Suchman 1995, p. 574). In this case, legitimacy is the public perception or assumption about the actions of the IMF, ECB, the Eurozone's Finance Ministers and Cyprus government. In addition, legitimacy concerns both how people act towards institutional actions and how they understand them (Suchmam, 1995). While a legitimate system may be considered by people as somehow trustworthy, meaningful, predictable, and credible, entities without an acceptable legitimate character 'are more vulnerable to claims that they are negligent, irrational, or unnecessary' (Meyer and Rowan, 1991:50). With regard to the Cyprus case, although we agree with the restructuring of the banking system towards transparency, supervision and safeguarding of stakeholder groups, it seems that EU officials were not ready for such endeavours. Their actions were hasty and inconsistent. Also, they showed disregard to major stakeholder groups, as banks' shareholders and depositors were not invited to participate in decision making. In fact, the deal was discussed and a decision was taken in absentia.

A levy, nevertheless, causes so much panic that it can hardly stand on its own. It needs supporting mechanisms of capital control. At the time of writing these lines, three months after the deal, a genuine loosening of restrictions over depositors' accounts is still in-waiting.

As we explain below, previous cases indicate towards long periods of restrictions and capital controls.

Uncertainty over capital controls

By examining the depositors' stake in more depth, it puts a lot about the Cyprus deal into perspective. Three months after the agreement, restrictions and capital controls are still in place. To fully understand the nature of restrictions, let us present the following example.
If an individual or legal person had the amount of one million Euros deposited in the Bank of Cyprus (BOC) prior 15 March, 2013, out of this amount:

- 37.5% has been levied and converted into shares;
- 22.5% is 'frozen' and possibly part or the whole of it, will be converted into shares (in other words, the final levy percentage is still undecided);
- The remaining 40% of the amount is 'frozen' for liquidity purposes;
- All money in time deposits are barred and have an automated compulsory reprogramming imposed by the Central Bank;

(**Source: Central Bank of Cyprus**[41])

In fact, three months after the deal, it remains unknown 'whether the final levy will be 37.5, 60, 70, 80 or 90 percent'[42]. This condition, however, is not that disappointing if we consider that an individual or legal person with a one million deposit in the second bank, namely, Cyprus Popular Bank (Laiki) is now left with 100K as all deposits in excess of €100K have been confiscated.

Among others, the long list of restrictions include measures on transfers, use of credit and debit cards, use of cheques, cash withdrawals, and access to deposits. At this point, it is worth comparing Cyprus to the case of Iceland. In 2008, three of Iceland's major banks collapsed, and $85 billion, some of which was owned by Dutch and British investors, were lost as a result. After a public referendum, the government declared that it would only safeguard domestic bank account holders and even refused to compensate retail depositors in foreign subsidiaries of Iceland's banks. Only a number of British investors managed to withdraw £95.5m from their internet-based accounts in Kaupthing bank before it collapsed[43]. No long queues outside ATM's occurred, as the local people felt that their money was secure after the referendum vote.

But of great interest to us, is the time span of Iceland's capital controls. These controls were supposed to last a few weeks or, at worst, a month or two, but half a decade later, the capital controls are still in place, getting increasingly restrictive. The capital controls in Cyprus are also meant to be temporary. Will they be temporary? Our aim is not to speculate on the length of restrictions but, under the circumstances, it seems that some of these measures will not be abolished easily.[44]

ATMs and POSs: a means to an end?

The Cyprus case has another dimension, one that lies within the framework of automation and cashless society. The complete picture assigns to ATMs, POS's, and credit cards a new role. While the European leaders were consulting each other throughout the critical two-week period, ATMs and cards were undertaking a pre-arranged job, securing a somewhat stable pace of life on the island. While the banking system was down and electronic transactions blocked, ATMs were programmed to issue standard, and by all means controlled, flow of cash.

Frankly, we do not posses any evidence stating that the levy was known or pre-arranged by the Cypriot government in advance. Despite the lack of concrete details, between the 1st and 15th March, six thousand individuals and legal persons transferred out of the country significantly unusual amounts of money. More specifically, just days before the hiatus of Cypriot banks on 15 March, one and a half billion euro; one and a half billion Dollars; 37.4 million pounds sterling and almost 11 billion Rubles were transferred abroad. A list with the 6000 large depositors was submitted to the parliamentary ethics committee by the Central Bank and then leaked to the public. Notably, politicians, senior bank officials and companies were among those who benefited from preferential information[45]. We do not support that the levy was pre-determined. But, if the levy deal was planned in advance, then the function of ATM's and POS's terminals during the fortnight was mainly a mean to an end. Overall, the bundle of restrictions, in combination with the use of ATMs and POSs, gave government more control as they would be able to track virtually all transactions.

Furthermore, the POSs terminals' role was jeopardized when many retailers and traders began refusing cards. As we discussed earlier in the timeline, there was considerable doubt amongst Cypriot retailers and traders as to whether they should accept card payments or not. The government's immediate intervention, however, in some way restored card transactions. Oxymoronically, at the same time as the central bank and the government were insisting that receiving payments at POSs is risk-free, retailers' revenues were drifting into accounts that got levied a few hours later.

Statistical data on card use by Cypriots and Tourists in Cyprus and abroad		
Table 5	**February 2013**	**March 2013**
Payments of Cypriot card holders to local merchants	**€176,697,814** (# of transactions: 2,496,161)	**€140,848,438** (# of transactions: 2,262,868)
Payments and Withdrawals of Cypriot card holders abroad	**€107,073,978** (# of transactions: 853,783)	**€142,634,098** (# of transactions: 860,774)
Payments of tourists to local merchants	**€21,429,235** (# of transactions: 223,908)	**€27,689,827** (# of transactions: 270,503)
(Source: Data kindly provided by JCC Payment Systems Ltd, Cyprus, Nicosia)		

Our findings (Table 2) point towards an increase in the number of transactions between February and March 2013. The card payments by Cypriots dropped by almost €36 million, reflecting the uncertainty in the market. This is also attributed to the restrictions imposed by the central bank. Appendix A shows the use of cards in March 2013 by sector. The payments and withdrawals abroad increased considerably, as the branches of Cypriot banks abroad were not affected by the deal or restrictions during or after the negotiations. Also, the payments by tourists to local merchants recorded an increase by €6,260,592. The increase in spending, however, is attributable to the increase of tourist arrivals. Specifically, the number of tourist arrivals in February was 42.327[46], while the tourist arrivals in March were 92,620[47].

But what are the likely consequences of the crisis of trust and capital restrictions? What are the lessons taught from similar cases like Greece? Many would point towards a series of micro and macro implications, such as an increase of stakeholders trying to compensate their income losses through additional shadow economy activities; tax evasion, barter; further shrinking of the GDP, higher levels of national dept and a dramatic slowdown of economic growth[48].

A cashless micro-economy within the macro-system

Taking the lack of trust and confidence into account, not unrelated is the possible emergence of a so called informal, dual, grey, hidden, or black economy. An ever increasing literature that began in the 1950s (among many others: Kaldor, 1956; Cagan, 1958; Guttman, 1977; Feige, 1979; Smith, 1981; Frey and Weck-Hanneman, 1984; Bhattacharyya, 1990; Tanzi, 1999; Aidt, 2003; Lyssiotou et al*,* 2004, Georgiou, 2007), explores legitimate concerns and consequences of parallel payment activities, most of which are hidden, undeclared, unreported and unrecorded. Often, the black economy concerns illegal activities, such as money laundering, trafficking and smuggling. In other cases, this activity is hardly illegal, such as undeclared work that is defined differently in national legislation, or barter, which is an old traditional system of exchanging goods or services for goods or services without using a monetary medium.

Some studies indicate that informal economy causes the governments of the European Union member states about €1 trillion a year[49]. Other studies rocket the number to 2.2 trillion[50]. The results vary because the estimation of shadow economy depends a lot on the dataset included in the calculations, as well as the methodology used. But informal economy is not comprised only by legal market activities that are deliberately kept hidden for reasons such as tax evasion. For example, tax evasion and avoidance in Cyprus is estimated between 8% and 10% of the annual GDP[51]. However, non-market economic activities, such as home production; undeclared work; barter; or the solicitation of money and food by poor people accounts for about two-thirds of the shadow economy. When a more holistic approach is taken, the size of the shadow economy in Cyprus the last five years, 2008 - 2012, is estimated between 26% and 28% of GDP (Table 3 and Appendix B). On average, European shadow economies (in many variants) are between 18.4% and 22.1% of total economic activity.

Table 6: Size of the Shadow Economy of 31 European countries in 2012, 0f GDP

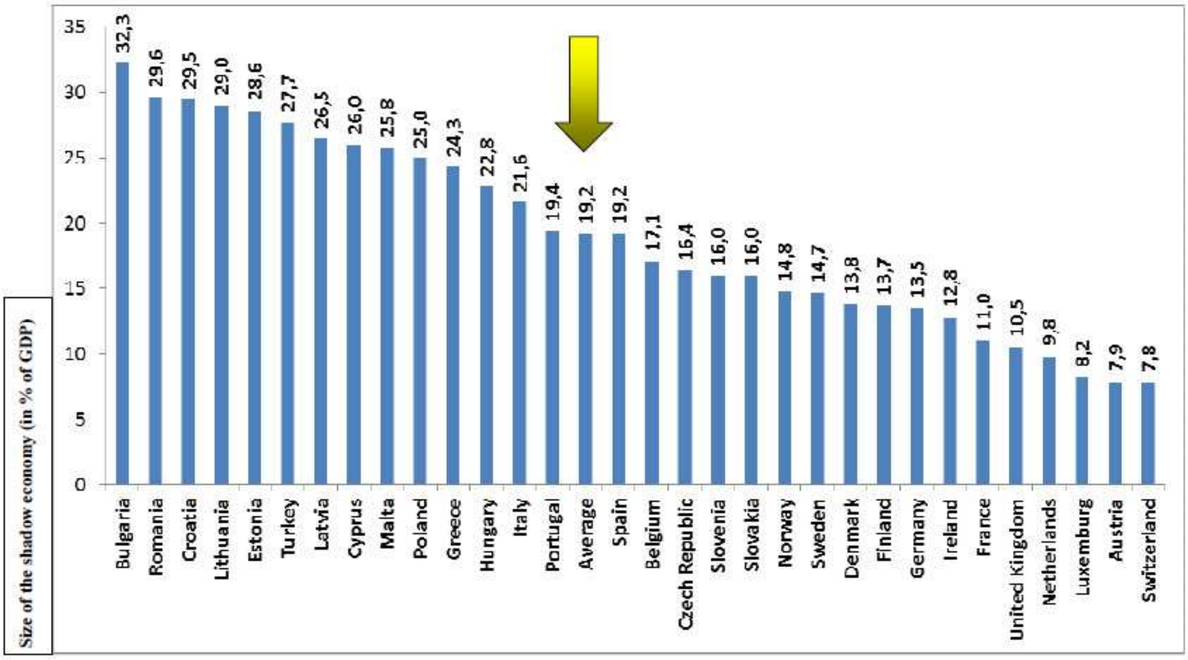

Table 5: *"Size and development of the Shadow Economy from 2003 to2012. Source: Schneider (2011)*

Already in Cyprus, in an effort to ease the effects of the financial crisis, a number of municipalities have joined together to launch a web-based barter scheme for individuals[52]. The barter program aims to offer a range of goods and services such as electronic goods, professional advice, private tuition lessons and gardening. It aims to be part of a cashless transaction system, which uses a digital form of currency instead of money. Members who register will be awarded with 300 points, which can immediately be exchanged for the goods and services posted on the website. However, it will be up to each member to decide on how many points their products or services will be advertised or exchanged, and the organisers hope that an element of trust, honesty and enthusiasm will be established among the barter members. If the barter scheme becomes popular, informal economy will become bigger; tax evasion and avoidance will rise; and the GDP will shrink even further. Illegal or not, barter affects the economic system. Fundamentally barter is a one-to-one activity. But when millions are bartering in an organised mode, it becomes a parallel micro-economy, complementing and altering the macro-system[53].

For instance, evidence from Greece, a country with heavy financial burdens since 2009, show that barter is becoming increasingly popular. Goods and services vary from home-made jam to Yoga lessons, from electrical appliances to clothes[54]. Barter networks exist face-to-face and online. Likewise, we believe that the Cyprus post-levy era provides a fertile ground for this kind of activity. Limited liquidity, higher tax rates, restrictions on money circulation, rise in unemployment, escalating poverty[55], and the current attitude of public towards the state, are all factors contributing to the development of informal economy and a growing scope for non-traditional banking. Besides, it is widely accepted that the situation of each country's official economy plays a crucial role in people's decision to work in the shadow economy[56].

The virtual dimension of non-traditional banking

Virtual, digital, or electronic currency, among its many names, offers an alternative economy. An interesting example of non-traditional banking is the 'Bitcoin', which operates outside the central bank regulatory framework. The Bitcoin is a decentralised digital form of currency which relies on an internet based peer to peer network. Bitcoins can be used to buy goods and services online, and are stored in electronic wallets with unique computerised codes. A consumer can transact in Bitcoins even with a mobile phone application. It may also be a potentially attractive currency in which to settle international transactions, without the usual bank charges or exchange rates[57].

Since the banking crisis in Cyprus, the demand for digital currencies such as Bitcoin is believed to have increased. In January 2013, one Bitcoin was worth $20. By March 2013 it soared up to $250. For many, it is the Cyprus crisis and the wider lack of confidence that has helped the Bitcoin gain popularity.[58]

During the bank closure, rumours also spread that the first Bitcoin ATM machine would soon open in Cyprus. Bitcoin entrepreneurs found the opportunity to announce that they planned to launch the first Bitcoin ATM machine in Cyprus as a '*humanitarian effort against the oppression of the governments and central banks'*. Its founder Jeff Berwick stated: ***We looked around the world and just decided Cyprus made a lot of sense since the banking system has been all but shut down for the last two weeks. We now have orders for 300+ machines in 30+ countries and are moving quickly to handle the demand.***[59] However, since ATM machines were operating in Cyprus during the shutdown, 'Bitcoin ATM' decided to launch their first ATM machine in Los Angeles, where they operate. Of course, their reason for referring to Cyprus is not questionable. Cyprus gained a huge amount of media attention during the fortnight and it was a perfect opportunity for the Bitcoin ATM founders to promote their virtual currency. In any case, Bitcoin currency is popular among investors and depositors that are worried about the safety of traditional banking and paper currency.[60] To be frank, we do not know if the happenings in Cyprus increased Bitcoin's popularity but, the Cyprus episode has added to the pool of concerns, prompting a retreat from the traditional banking system.

There is also a high degree of scepticism around its credibility. Firstly, the Bitcoin is not a tangible currency like paper money, but more like voucher codes that can be stored on the internet. Even though the Bitcoin ATM will give users the chance to exchange Bitcoins with paper cash, some people may feel reluctant to move away from the traditional banking system as they find it difficult to comprehend how its complex system works. Secondly, the value of a Bitcoin fluctuates erratically. As we mentioned earlier, the value of a Bitcoin has increased from $20 up to $250 and then dropped down to $130 within six months. Its instability in value raises many questions about its viability.

Thirdly, at present Bitcoin is not accepted by governments or banks, something which is a cause for concern. In fact the FBI released a report last year that the Bitcoin can easily be used to launder money or engage in criminal activities due to its decentralised nature. Nevertheless, regulators have already started to take virtual currencies more seriously and are in the process of applying money-laundering rules. Lastly, a "Bitcoin wallet" is also susceptible to being hacked. Last year, the reputation of Bitcoin was damaged when 24,000 Bitcoins were stolen, worth $US 250,000.[61]

Yet, now that the news on its existence has spread further, does the Bitcoin, or any other virtual currency have the potential to replace cash? With all its flaws, can it become the global currency of the future? Would the Cypriot people, who are still trying to overcome the bail-in shock, be willing to throw their money into the vast world of cyberspace, with no protection guaranteed if and when something goes wrong with the Bitcoin?

To conclude, it would make more sense to wait and see if the Bitcoin will sustain itself in the global economy before opting to transact with any type of virtual currency. On the other hand, are investors and depositors willing to wait? Will the Cyprus levy be the last in

Europe? Is Cyprus a special case? Well, if the answer is no, it is good to remember that in a similar scenario, history is expected to repeat itself in the following way: electronic wire transfers; electronic payments (such as online bill payment services); mobile payments; automated payments (such as direct debits and standing orders); and payment cheques will freeze. With their widely known costs, advantages and drawbacks, credit cards and ATMs are expected to become central in daily life but with cashless restrictions in place. Queues will begin to form in front of the cash machines and, uncertainty will sky-rocket once again, contributing towards building up the popularity of non traditional banking, informal economy and virtual currencies.

Appendix A: Cards use in Cyprus by sector as of March 2013[62]

Merchant Category Group Report - Cards used in Cyprus Reporting Month: Mar 2013				
	Monthly Transactions	Monthly Turnover	YTD Transactions	YTD Turnover
Airlines	0.10%	0.65%	0.10%	0.55%
Car Rentals	0.35%	0.84%	0.22%	0.49%
Hotels	1.33%	5.13%	0.93%	3.25%
Local Transportation	0.00%	0.00%	0.00%	0.00%
Travel Agents	0.28%	1.72%	0.25%	1.34%
Utilities	4.63%	6.62%	4.58%	6.29%
Motoring - Dealers, Accessories and Services	0.47%	1.64%	0.47%	1.46%
Do-It-Yourself & Household stores	3.76%	5.10%	3.73%	4.66%
Duty free stores	0.87%	1.07%	0.70%	0.78%
Department stores	3.59%	2.81%	3.84%	2.67%
Supermarkets	34.41%	24.36%	30.32%	19.47%
Other food and drink shops and bakeries	5.56%	1.68%	4.83%	1.32%
Petrol	12.12%	9.50%	11.18%	8.32%
Clothing, Shoes and Accessories stores	7.51%	7.19%	9.99%	8.49%
Furniture stores	0.23%	1.08%	0.28%	0.97%
Household appliance stores	0.00%	0.03%	0.01%	0.01%
Electronics, Computers, Peripherals and Music stores	0.95%	1.56%	1.02%	1.51%
Restaurants, Bars and Catering	5.17%	4.28%	4.64%	3.58%
Fast food restaurants	0.18%	0.05%	0.17%	0.05%
Pharmacies and drug stores	4.64%	3.00%	4.51%	2.64%
Books and stationery	0.64%	0.32%	0.71%	0.34%
Jewelry	0.29%	1.14%	0.32%	0.85%
Gift, Souvenirs and Toy shops	2.95%	2.14%	2.66%	1.84%
Direct marketing and catalogue sales (Mail Order, Telephone Order)	0.33%	0.90%	0.33%	0.73%
Kiosks & Newsagents	1.39%	0.39%	1.30%	0.33%
Insurance	0.38%	1.73%	0.42%	1.62%
Beauty, Barber and Personal Care shops	1.57%	1.46%	1.46%	1.22%
Professional services	0.18%	0.76%	0.17%	0.48%
Betting, Track, Casino establishments	0.09%	0.10%	0.08%	0.08%
Health	1.38%	3.09%	1.32%	2.73%
Schools and colleges	0.14%	1.03%	0.14%	1.01%
Charitable organisations	0.01%	0.02%	0.02%	0.03%
Membership organisations	0.01%	0.01%	0.01%	0.01%
Government	2.85%	6.60%	7.83%	19.48%
Parking	0.36%	0.43%	0.41%	0.41%
Entertainment	0.36%	0.43%	0.41%	0.41%
Others	1.24%	1.56%	1.04%	0.97%
TOTAL	100.00%	100.00%	100.00%	100.00%

Appendix B: Closing the European Tax Gap[63]

Country	GDP 2009	Size of Shadow Economy	Tax burden - 2009	Size of Shadow Economy	Tax lost as a result of Shadow Economy
	Euro'm	%	%	Euro'm	Euro'm
Austria	284,000	9.7	42.7	27,548	11,763
Belgium	353,000	21.9	43.5	77,307	33,629
Bulgaria	36,000	35.3	28.9	12,708	3,673
Cyprus	17,000	28.0	35.1	4,760	1,671
Czech Republic	145,000	18.4	34.5	26,680	9,205
Denmark	234,000	17.7	48.1	41,418	19,922
Estonia	15,000	31.2	35.9	4,680	1,680
Finland	180,000	17.7	43.1	31,860	13,732
France	1,933,000	15.0	41.6	289,950	120,619
Germany	2,499,000	16.0	39.7	399,840	158,736
Greece	230,000	27.5	30.3	63,250	19,165
Hungary	98,000	24.4	39.5	23,912	9,445
Ireland	156,000	15.8	28.2	24,648	6,951
Italy	1,549,000	27.0	43.1	418,230	180,257
Latvia	18,000	29.2	26.6	5,256	1,398
Lithuania	27,000	32.0	29.3	8,640	2,532
Luxembourg	42,000	9.7	37.1	4,074	1,511
Malta	6,200	27.2	34.2	1,686	577
Netherlands	591,000	13.2	38.2	78,012	29,801
Poland	354,000	27.2	31.8	96,288	30,620
Portugal	173,000	23.0	31.0	39,790	12,335
Romania	122,000	32.6	27.0	39,772	10,738
Slovakia	66,000	18.1	28.8	11,946	3,440
Slovenia	36,000	26.2	37.6	9,432	3,546
Spain	1,063,000	22.5	30.4	239,175	72,709
Sweden	347,000	18.8	46.9	65,236	30,596
United Kingdom	1,697,000	12.5	34.9	212,125	74,032
Total or unweighted average	12,271,200	22.1	35.9	2,258,223	864,282

[1] European Central Bank (2009) Cyprus – 'Banknotes - All denominations - Stock - denominated in National currency'. Online at: http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=195.BKN.M.CY.NC10.B.ALLD.ZZ.S.N (Accessed: 24/04/2013).

[2] European Central Bank (2009) Cyprus – 'Coins - All denominations - Stock - denominated in National currency'. Online at: http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=195.BKN.M.CY.NC10.C.ALLD.ZZ.S.N (Accessed: 24/04/2013).

[3] Central Bank of Cyprus (2013) 'List of Financial Institutions'. Online at: http://www.centralbank.gov.cy/nqcontent.cfm?a_id=11366 (Accessed, 28/03/2013).

[4] European Central Bank (2012) 'Number of branches of Credit Institutions - Number of Credit Institutions and their branches providing cash services - Stock - denominated in Quantity'. Online at: http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=195.BKN.H.CY.A020.Z.ZZZZ.ZZ.S.Q (Accessed: 20/04/2013).

[5] Monetary and Financial Statistics (March 2013) 'Total Deposits of non-MFIs held with MFIs'. Nicosia, Statistics Department, Central Bank of Cyprus. Online at: http://www.centralbank.gov.cy/nqcontent.cfm?a_id=9837

[6] Central Bank of Cyprus (2013) 'Annual Economic Indicators'. Online at: http://www.centralbank.gov.cy/media/pdf/AnnualEconomicIndicatorsFeb13eng.pdf (Accessed 20/03/2013)

[7] Monetary and Financial Statistics (March 2013) 'Total Deposits of non-MFIs held with MFIs'. Nicosia, Statistics Department, Central Bank of Cyprus. Online at: http://www.centralbank.gov.cy/nqcontent.cfm?a_id=9837 (20/03/2013).

[8] For the collection of findings we contacted a number of Bank officials across the four main Cypriot banks. Stelios Lymbouras (Group Webmaster at Hellenic Bank); Christos Augoustinos (Marketing Manager at the Bank of Cyprus Plc); Kyriacos Shimillas (Marketing Manager at the Card Centre of the Bank of Cyprus); Anita Theofilou (Alpha Express Banking Officer); Rena Triggidou (Press & Communication Office at Cooperative Central Bank Cyprus).

[9] '1bank' is BOC's digital platform enabling customers to carry out all their banking transactions, including phone, internet, and mobile services. http://www.bankofcyprus.com.cy/en-GB/Internet-Banking/1bank/welcome/ (Accessed, 06/06/2013).

[10] Other findings show that e-banking services are currently being used by a specific generation born between the 1970's and 1990's. (Telephonic Interview with Lymbouras, S., 06/06/2013, Group Webmaster, Hellenic Bank). Also, the results of an annual survey, titled, 'Information and Communication Technologies Usage in Households and by Individuals 2012' undertaken by the Statistical Service of the Republic of Cyprus, in the first quarter of 2012, showed that almost 30% of the 584,863 internet users in Cyprus (representing 52.2% of the population) used mobile or smart phones to access the internet away from home or work while 25,9% used a laptop, notebook or netbook.

[11] Bryman A. and Bell, E (2011) 'Business research methods'. (3rd Ed.). New York, Oxford University Press

[12] Peston, R. (16/03/2013) 'Shock in Cyprus as savers face bailout levy'. BBC. Online at: http://www.bbc.co.uk/news/world-europe-21814325 (16/03/2013).

[13] The Guardian (16/03/2013) Cyprus Eurozone bailout prompts anger as savers hand over possible 10% levy. Online at: http://www.guardian.co.uk/world/2013/mar/16/cyprus-eurozone-bailout-anger (16/03/2013).

[14] Peston, R. (16/03/2013) 'Shock in Cyprus as savers face bailout levy'. BBC. Online at: http://www.bbc.co.uk/news/world-europe-21814325 (16/03/2013).

[15] Powers, D. 'The Banking Crisis of 1933: Seattle's Survival during the Great Depression Bank Closures'. Online at: http://depts.washington.edu/depress/bank_crisis_1933.shtml.

[16] Spiegel. 'The Ghost of Argentina'. Online at: http://www.spiegel.de/international/business/the-ghost-of-argentina-what-happens-when-countries-go-bankrupt-a-588419.html.

[17] Malamud, A. *'Social Revolution or Political Takeover? The Argentine Collapse of 2001 Reassessed'. Online at:* http://www.guardian.co.uk/world/2002/apr/20/argentina.davidteather.

[18] Christou, G. (19/03/2013) 'Banks will remain closed but ATMs Stocked up'. Cyprus Mail. Online at: http://www.cyprus-mail.com/atm/banks-will-remain-closed-atms-stocked/20130319 (Accessed 19/03/2013).

[19] Ministry of Finance (18/03/2013) 'Announcement Agreement for a Financial Assistance to the Republic of Cyprus'. Online at: http://www.mof.gov.cy/mof/mof.nsf/All/BB670607715A44D6C2257B3200368FE9/$file/agreemenfinancialassistance.pdf (Accessed 18/03/2013).

[20] For Ireland: Embassy of Ireland (19/03/2013) 'Cyprus'. Online at: http://www.dfa.ie/home/index.aspx?id=75557 (Accessed: 20/03/2013). For the UK: British High Commission (22/03/2013) 'Cyprus is implementing measures to protect its banking sector'. Online at: https://www.gov.uk/government/world-location-news/cyprus-banks (Accessed: 22/03/2013).

[21] The Guardian (18/03/2013) 'Take a pile of euros and watch out for thieves, Foreign Office tells Britons going on holiday to Cyprus'. Online at: http://www.telegraph.co.uk/news/worldnews/europe/cyprus/9949333/Take-a-pile-of-euros-and-watch-out-for-thieves-Foreign-Office-tells-Britons-going-on-holiday-to-Cyprus.html (Accessed 18/03/2013).

[22] BBC (19/03/2013) 'MoD flies emergency cash to Cyprus for British personnel'. Online at: http://www.bbc.co.uk/news/uk-21847013.

[23] a) Batiz-Lazo, B. (02/12/2013).Commentary and feedback b) Diamond DW and Dybvig PH (1983) 'Bank Runs, Deposit Insurance, and Liquidity'. *Journal of Political Economy* 93 (3): 401-419.

[24] British High Commission (22/03/2013). 'Cyprus is implementing measures to protect its banking sector'. Online at: https://www.gov.uk/government/world-location-news/cyprus-banks (Accessed: 22/03/2013).

[25] Eurobank. On line at: http://www.eurobank.gr/Uploads/Reports/New%20Europe%20Cyprus%20March%2026.pdf (accessed 25/03/2013).

[26] The Guardian (28/03/2013) 'Cyprus: lessons from a small disaster'. Online at: http://www.guardian.co.uk/commentisfree/2013/mar/28/cyprus-lessons-disaster-editorial (accessed 28/03/2013).

[27] Randow, J. (28/03/2013) 'Cyprus Supply of Euro Banknotes Is Precaution, Bundesbank Says'. Online at: http://www.bloomberg.com/news/2013-03-28/cyprus-supply-of-euro-banknotes-is-precaution-bundesbank-says.html (Accessed: 28/03/2013).

[28] Malaud, A. (2006) 'Social Revolution or Political Takeover? The Argentine Collapse of 2001 Reassessed'. Online at: http://www.eui.eu/Personal/Researchers/malamud/Popular_impeachment_in_Argentina.pdf.

[29] Adams, R. (21/03/2013) 'Cyprus: latest in a long and inglorious line of bank shutdowns'. The Guardian. Online at: http://www.guardian.co.uk/world/2013/mar/21/cyprus-long-inglorious-line-bank-shutdowns

[30] Evripidou, S. (04/04/2013). Central Bank could face slew of lawsuits from depositors. Online at: http://www.cyprus-mail.com/bailout/central-bank-could-face-slew-lawsuits-depositors/20130404 (Accessed: 04/04/2013).

[31] Theocharides, G. (2013) online at: http://www.fiduciaryfuture.com/assets/mainmenu/66/editor/GeorgeTheocharides.pdf.

[32] The Economist (25/03/2013) 'Waiting for the fall-out'. Online at: http://www.economist.com/blogs/freeexchange/2013/03/euro-crisis-2.

[33] Bruce, A. (27/03/2013) 'Cyprus bailout not expected to be euro zone's last -Reuters poll'. Reuters. Online at: http://www.reuters.com/article/2013/03/27/cyprus-bailout-poll-idUSL3N0CJI8120130327.

[34] Komileva, L. (27/3/2013) ' Cyprus bailout not expected to be euro zone's last'. Cited in Reuters' poll'. Online at: http://www.reuters.com/article/2013/03/27/cyprus-bailout-poll-idUSL3N0CJI8120130327 (Accessed: 27/03/2013).

[35] Citi (18/03/2013) 'The euro area recovery starts with Cyprus'. Online at: https://ir.citi.com/O8u3f7da8eWwkKZvSBZamZmMvIkXayWXBvDA2UHVnTkqo8pwbAlB3A%3D%3D (Accessed, 20/03/2013).

[36] The Economist (07/04/2013) 'The Cypriot deal: Second time unlucky'. Online at: http://www.economist.com/news/finance-and-economics/21574507-new-plan-better-first-isnt-saying-much-second-time-unlucky.

[37] Reuters (26/03/2013) 'Cyprus was unique case, not model for EU: ECB's Coeure'. Online at: http://www.reuters.com/article/2013/03/26/us-eurozone-ecb-coeure-idUSBRE92P08U20130326. (Accessed 05/04/2013).

[38] Cyprus Mail (31/03/2013) 'Schaeuble says euro zone savings deposits are safe - Cyprus Mail'. Online at *www.cyprus-mail.com/bailoout/schaeuble-says-euro.../20130331* (Accessed 05/04/2013).

[39] Qiang, H. (23/04/2013) 'Cypriot president says bail-in in Cyprus to be applied elsewhere'. Online at: http://news.xinhuanet.com/english/world/2013-04/23/c_132334065.htm (Accessed 05/04/2013).

[40] The two largest Cypriot banks sought state aid following massive losses due to their consent to accept the Greek sovereign debt levy, counting €4.5 billion in Greek bond holdings. The Economist (07/04/2013) 'The Economist explains: What is a Bail-in?' Online at: http://www.economist.com/blogs/economist-explains/2013/04/economist-explains-2.

[41] Central Bank of Cyprus (2013) 'Clarifications for the better understanding of the resolution measures implemented under the Resolution of Credit and Other Institutions Law, 2013 at the Bank of Cyprus and Laiki Bank'. Online at:

http://www.centralbank.gov.cy/nqcontent.cfm?a_id=12631&lang=en (Accessed: 07/06/2013).

[42] Aloneftis, A. (06/06/2013) 'Proektasis'. Cyprus Broadcasting Corporation (CyBC). Online at: http://www.youtube.com/watch?v=Q-cBsQhixEA

[43] Bowers, S. (26/06/2012) 'Iceland banking collapse: diary of a death spiral'. The Guardian. Online at http://www.guardian.co.uk/business/2012/jun/26/iceland-banking-collapse-diary-death-spiral (Accessed: 20/04/2013).

[44] Danielsson, J. (28/03/2013) 'The capital controls in Cyprus and the Icelandic experience'. Online at: http://www.voxeu.org/article/capital-controls-cyprus-and-icelandic-experience (Accessed: 28/03/2013).

[45] Constantinou, S. (14/04/2013) 'President Anastasiades' daughter included in list of 6 000 who moved money'. Cyprus Broadcasting Corporation (CyBC). Online at: http://www.cybc.com.cy/en/index.php/cyprus-news/item/2831-1 (Accessed: 14/04/2013).

[46] Statistical Service of the Republic of Cyprus (2013) 'Tourist Arrivals, February 2013'. Online at: http://www.mof.gov.cy/mof/cystat/statistics.nsf/All/7ED138C31D3D9D5EC2257AE2003838CE?OpenDocument&sub=1&sel=1&e=&print (Accessed 24/04/2013).

[47] Statistical Service of the Republic of Cyprus (2013) 'Tourist Arrivals, March 2013'. Online at: http://www.mof.gov.cy/mof/cystat/statistics.nsf/All/7ED138C31D3D9D5EC2257AE2003838CE?OpenDocument&sub=1&sel=1&e=&print (Accessed: 01/05/2013).

[48] Pollin, R. and Ash, M. (2013) 'Debt and Growth: A Response to Reinhart and Rogoff' in *The New York Times*, April 29, 2013. Online at: http://www.nytimes.com/2013/04/30/opinion/debt-and-growth-a-response-to-reinhart-and-rogoff.html?_r=0 (Accessed: 29/04/2013). Also, Herndon, T., Ash, M. and Pollin, R. (2013) 'Does high public debt consistently stifle economic growth? A critique of Reinhart and Roggo ff'. Online at: http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_301-350/WP322.pdf (Accessed: 02/0/2013).

[49] Murphy, R. (2009) 'Closing the European Tax Gap'. Norfolk, Tax Research LLP

[50] A.T. Kearney Inc. (2011) 'The Shadow economy in Europe, 2011: Using electronic payment systems to combat the shadow economy'. Online at: http://media.hotnews.ro/media_server1/document-2013-04-15-14623198-0-shadow-economy-2011.pdf (Accessed: 22/04/2013).

[51] Pashardes, P. and Polycarpou, A. (2008) 'Income Tax Evasion, Inequality and Poverty'. Cyprus Economic Policy Review. Vol. 2, No. 2, pp. 37-49. Also, telephonic conversation with Georgiou, G. (05/04/2013) Central Bank of Cyprus.

[52] Anonymous (19/04/2013) 'Barter Scheme'. incyprus.com.cy. online at: http://www.incyprus.com.cy/en-gb/Cyprus/4170/34444/barter-scheme (Accessed: 15/04/2013).

[53] Stout, J. 'The Economic Impact Of Bartering'. Online at: http://www.barternews.com/the_economic_impact_of_bartering.htm (Accessed: 25/04/2013).

[54] Organised Bartering is winning ground not just in Greece but also in other part of the world. For Greece: Lowen, M. (11/04/2012) 'Greece Bartering System Popular in Volos'.

Online at: http://www.bbc.co.uk/news/world-europe-17680904. For the US: Taper, S. (1995) 'Cashless Society: Original Style'. Online at: Cross Sections, 1995, issue Sum, pages 30. A successful barter network in the UK is the 'barter-bay': http://barterbay.uk.com/. For Italy: De Filippo, A. (15/01/2013) 'In time of crisis Italy swaps'. Online at: http://www.lifeinitaly.com/lifeinitaly/bartering. (Accessed: 10/04/2013).

[55] Needless to say that the levy affected not only individuals and companies, but also charity organisations.

[56] European Commission (2012) 'Shadow Economy'. Online at: http://ec.europa.eu/europe2020/pdf/themes/06_shadow_economy.pdf (Accessed: 15/04/2013).

[57] The Economist (11/04/2013) 'How does Bitcoin work?' Online at: http://www.economist.com/blogs/economist-explains/2013/04/economist-explains-how-does-bitcoin-work?fsrc=scn/fb/wl/bl/ee/bitcoinwork2. (Accessed: 15/04/2013).

[58] Matonis, J. (24/03/2013) *'Cyprus Goes Cashless the Hard Way'.* Forbes. Online at: http://www.forbes.com/fdc/welcome_mjx.shtml. (Accessed: 24/03/2013).

[59] Wile, R. (02/04/2013) 'Bitcoin ATM founder: We already have orders from from 30+ countries'. Business Insider. Online at: http://www.businessinsider.com/cyprus-bitcoin-atm-guy-responds-2013-4. (Accessed, 02/04/2013).

[60] Egan, M. (22/03/2013) 'As Cyprus Implodes, Bitcoin Interest Explodes'. Online at: http://www.foxbusiness.com/investing/2013/03/22/bitcoin-interest-explodes-as-cyprus-nearly-implodes/. (Accessed: 25/03/2013).

[61] Vrondas, J. (15/04/2013) 'Beware Bitcoin: Right now it looks and feels like a bubble'. Online at: http://www.abc.net.au/technology/articles/2013/04/15/3737055.htm. (Accessed: 15/04/2013).

[62] JCC Payments (2013) 'Cards use in Cyprus by sector as of March 2013'. This table, together with other data, was kindly provided by JCC Payments Ltd.

[63] Murphy, R. (2009) 'Closing the European Tax Gap'. Norfolk, Tax Research LLP.