UNODC
United Nations Office on Drugs and Crime

Draft:

Study on Illicit Financial Flows resulting from Drug Trafficking and other Transnational Organized Crime

Preliminary results

NOT FOR QUOTATION

CONTENTS

Overview of preliminary findings

- The purpose of this study is to examine the magnitude of illicit funds generated by drug trafficking and organized crime, and the extent to which they are laundered. Research in this area is still limited and results difficult to compare, but likely orders of magnitude may be estimated, though they should be treated with caution.
- The most widely quoted figure for the extent of money laundered has been the IMF 'consensus range' of 2% to 5% of global GDP, made public by the IMF in 1998. An analysis of the results from various studies suggests that all criminal proceeds are likely to amount to some 3.6% of global GDP (2.3%-5.5%), equivalent to about US$2.1 trillion (2009).
- The best estimate for the amount available for laundering through the financial system would be equivalent to 2.7% of global GDP (2.1%-4%) or US$1.6 trillion in 2009. Still within the IMF 'consensus range', this figure is located towards its lower end.
- If only flows related to drug trafficking and transnational organized crime activities are considered, related proceeds would be equivalent to about 1.5% of global GDP. The funds available for laundering through the financial system would be equivalent to some 1% of global GDP.
- The largest income for transnational organized crime comes from illicit drugs, which account for some 20% (17%-25%) of all crime proceeds, about half of transnational organized crime proceeds and 0.6% to 0.9% of global GDP. In turn, drug-related proceeds available for money-laundering through the financial system would be equivalent to between 0.4% and 0.6% of global GDP.
- Expressed as a proportion of national GDP, all crime proceeds appear to be generally higher in developing countries and tend to be laundered abroad more frequently
- The results also suggest that the 'interception rate' for anti-money-laundering efforts at the global level remains low. Globally, it appears that much less than 1% (probably around 0.2%) of the proceeds of crime laundered via the financial system are seized and frozen.
- Research is still underway, in the context of the present study, on illicit financial flows generated specifically by some transnational organized crime markets and the likely distribution of these flows across regions. Preliminary results suggest that most of the proceeds from drug trafficking are generated and laundered in developed countries.
- Analysis of the socio-economic impact suggests that the most severe consequence of criminal funds is the further perpetuation and promotion of criminal activities. In the drug area, research indicates that the socio-economic costs related to drug abuse are twice as high as the income generated by organized crime; in some countries (USA, UK) one can even find a 3:1 ratio.
- Criminal funds, even if invested in the legal economy, may create a number of problems, from distortions of the resource allocation, to 'crowding out' licit sectors and undermining the reputation of local institutions, which, in turn, can hamper investment and economic growth. The situation is less clear-cut for financial centres receiving illicit funds, but the long-term consequences may be negative if they do not actively fight money-laundering.

Introduction

Garnered through the proceeds of illicit trafficking and other forms of organized profit-motivated crime, 'dirty money' can hinder governance, stability and economic development.

Money-laundering is particularly problematic when it is directly related to organized crime activities that cause severe harm and generate considerable illicit profits, such as trafficking in illicit drugs, theft of natural resources, trafficking in human beings and illegal trade in arms, to mention some. While work has been done, including by UNODC, to estimate the proceeds of various transnational criminal activities, there remain considerable knowledge gaps, including on the extent to which these proceeds flow through the international financial system.

UNODC Integrated Programme and Oversight Branch has commissioned a study on this issue to the Studies and Threat Analysis Section. This study is intended as a contribution towards filling these knowledge gaps.

The study is ongoing and this report presents preliminary results.

Scope of the study

The study concentrates on the 'illicit financial flows emerging from drug trafficking and other transnational organized crime' and their socio-economic implications.

One key aim of this study is to determine the likely magnitude of crime proceeds and to investigate the likely extent of global money-laundering. The report thus starts with an overview of the methodologies proposed in the scientific literature to measure illicit financial flows, followed by an analysis and discussion of previous results in this area. While highly diverse in nature, it will be shown that by pooling results of research undertaken at the national and the global level and by expressing estimated crime proceeds and estimated amounts of money laundered as a proportion of GDP, some likely orders of magnitude of the problem can be established. This also helps to aggregate results referring to different years. One key question in this area will be whether currently available research still supports the widely quoted IMF 'consensus range' of the amounts laundered being equivalent to between 2% and 5% of GDP, put forward by the IMF back in 1998.

This is followed by a chapter presenting the methodology to analyse financial flows emerging from selected transnational organized crime activities, their flows into the financial system and the final destinations of these flows. This is a particularly challenging task as new territory is being entered here. New research has been undertaken for this chapter, and work is still ongoing. Some preliminary findings will be presented in this draft.

A subsequent chapter will focus on the socio-economic impact of illicit financial flows emerging from drug trafficking and other transnational organized crime. It will analyse the consequences of such flows for the underlying predicate crimes and their socio-economic consequences. It will then analyse the impact of such illicit financial flows, if invested in the legal sectors of the economy. Finally, it will analyse the impact of such flows once they are laundered in foreign jurisdictions. It will discuss the consequences for the countries of origin

of such flows, and the consequences for the recipient countries, both in the short- and in the long run.

The discussion on the socio-economic impact will be followed by a chapter presenting the legal instruments that have evolved over the last two decades to fight such illicit money flows at the international level. While these efforts concentrated first on drug related money laundering, it will be shown how these instruments gradually broadened their scope to encompass money laundering of all serious crime related proceeds.

The report ends with a summary and preliminary conclusions. The point that – based on all existing estimates – the 'success rate' for anti-money laundering efforts is still limited is made, and the ensuing need for better results. There is thus a clear need for better international cooperation, and a need for a proper implementation of existing international instruments by all jurisdictions, as the whole system can be only as strong as its weakest links.

1) Estimating the global proceeds of crime

a) Methodological approaches proposed in the literature

In order to measure illicit financial flows, and thus the extent of money-laundering, a number of methods have been proposed in the literature.[1] The issues at stake are very complex. As will be shown below, there is currently no single method that would give clear, unambiguous and indisputable results. In contrast to several other forms of crime, where victims report their case to the authorities, money-laundering is a largely hidden phenomenon and only a small proportion of cases tends to eventually surface (in reported suspicious transactions, court cases, et cetera).

Traditional approaches used to discuss money-laundering have been based on *field and case studies*. In the Netherlands, for instance, Meloen et al.[2] analyzed 52 criminal cases wherein property had been confiscated. They found related money-laundering activities of more than one million Dutch guilders (about US$500,000) per case. The basic problem with such an approach is that it is unclear how representative the studied cases are, and to what extent they represent total money-laundering activities in a country. The case studies are helpful to better understand the behavior of launderers; what they purchase, where and how they launder and so on. In order to go beyond describing and summarizing the specific cases, however, a number of additional assumptions must be made about the underlying population of money-launderers, which will not necessarily reflect reality.

Another way of estimating the amount of money-laundering is to carry out *surveys and interviews* with business people and experts from the police and government departments and ministries. For instance, John Walker was commissioned by the Australian Financial Intelligence Unit in 1992 to undertake such a survey, based on expert opinion, to determine the percentages laundered from the proceeds of each type of crime.[3] As with all surveys, this approach has a number of potential biases. The sample might not be representative and the people interviewed may have their own perception biases, notably as objective and verifiable data is generally not available to answer such questions. In addition, there can be biases linked to interpretation, non-response and sample.

A further method of estimating money-laundering is to analyze *suspicious or unusual transactions* reported to *financial intelligence units* (FIUs), which have been established in most countries to monitor and control money-laundering. There are, however, variations between countries regarding reporting requirements, particularly related to thresholds that may trigger a report, or the extent to which non-monetary payment instructions (such as bearer instruments) should be included. Moreover, information overload can lead to delays in follow-up investigations. There is also a potential problem of strategic dilution of information

[1] The following discussions draws heavily on Brigitte Unger, "Money Laundering – A Newly Emerging Topic on the International Agenda," *Review of Law and Economics*, 2009.
[2] J. Meloen, R. Landman, H. de Miranda, J.van Eekelen and S. van Soest , Buit en Besteding, Een empirisch onderzoek naar de omvang, de kenmerken en de besteding van misdaadgeld, Reed Business Information, Den Haag, Netherlands, 2003.
[3] J. Walker, *Estimates of the Extent of Money Laundering in and through Australia*, paper prepared for the Australian Transaction Reports and Analysis Centre, John Walker Consulting Services, Queanbeyan, Australia, September 1995.

by respondents[4] as they may fear negative consequences and start reporting a larger number of transactions to the FIUs in order to avoid a later accusation of not having informed the authorities. This can lead to a strong bias of this indicator in some countries and make country comparisons difficult.[5]

In addition, a number of top-down approaches have been proposed in the literature. Several of these methods are based on the analysis of *statistical discrepancies* in official data.

One method in this category is to analyse the 'errors and omissions' in the balance payments ('*hot money method'*). These are supposed to reflect differences between registered capital inflows and registered capital outflows. The assumptions are that errors and omissions may arise because of a failure to measure certain movements of private short-term capital, and that it is appropriate to add these to the recorded flows of short-term capital in order to get an estimate of total "hot money" flows.[6] The basic logic here is that the better the recording of capital flows, the higher the overall transparency of financial transactions, the lower the 'errors and omissions' and the less likely it becomes that countries become victims of money-laundering activities.

The '*residual approach'* attempts to measure capital flight by taking the difference between inflows (sources) of funds and outflows (uses) of funds, which are unrecorded.[7] The question here is how well the residual reflects capital flight. Moreover, the approach does not include other discrepancies such as time lags and different calculation conventions. Another question that arises from using this method is to what extent capital flight, which may consist of both laundered money and tax evasion, actually measures money-laundering.

Kar and Smith,[8] on behalf of Global Financial Integrity (GFI), refined these concepts, in order to estimate the illicit financial flows out of developing countries (previously referred to as 'flight capital'). Starting with an analysis of the merits and the limitations of the Hot Money Method, the Dooley Method, the World Bank Residual Methods, the Direction of Trade Statistics-based Trade Mispricing Model and the International Price Profiling-based Trade Mispricing Method, they adopted the *World Bank Residual Method*, applying the '*change in external debt' (CED)* version, in combination with the *Trade Mispricing Model* in its '*gross excluding reversals'* (GER) version as the best model. This was slightly modified with a two-stage filtration process on 'non-normalized' estimates. The results emerging from these models, however, do not include the proceeds of criminal commercial smuggling such as drugs, minerals and contraband goods, and any trade mispricing will not be picked up in the model if there was collusion between importers and exporters to fake invoices.

[4] E. Takáts, "A Theory of 'Crying Wolf ': The Economics of Money Laundering Enforcement," IMF Working Paper No. 07/81, April 2007; L. Dalla Pellegrina and D. Masciandaro, "The Risk-Based Approach in the New European Anti-Money Laundering Legislation: A Law and Economics View," Review of Law and Economics, 2009, 5 (2), Article 6.
[5] B. Unger and F. van Waarden, "How to Dodge Drowning in Data? Rule- and Risk-Based Anti Money Laundering Policies Compared," *Review of Law and Economics*, 5(2), 2009, Article 7.
[6] F. Schneider and U. Windischbauer, "Money Laundering: Some Facts," *European Journal of Law and Economics*, 26(3), 2008, pp. 387-404.
[7] M. De Boyrie, S. Pak and J. Zdanowicz, "The Impact of Switzerland's Money Laundering Law on Capital Flows Through Abnormal Pricing in International Trade," *Applied Financial Economics*, vol. 15, 2006, pp. 217-230.
[8] D. Kar and D. Cartwright-Smith, *Illicit Financial Flows from Developing Countries: 2002-2006*, Global Financial Integrity, Washington D.C., 2008.

The '*currency demand approach*' tries to measure the discrepancy between the regular and excess demands for a currency ('cash'). This approach was applied by Tanzi[9] to demonstrate both the 'shadow economy' and the extent of money-laundering. It is assumed here that cash is frequently used in hidden transactions to avoid observable traces for the authorities. The extent of cash in an economy is used as an indicator of the size of the shadow economy or the extent of money-laundering. An increase in the shadow economy or money-laundering would necessitate more cash, and hence increase the demand for a currency. By comparing the amount of money printed and the amount of money actually circulating, Tanzi (1997) concluded that some US$5 billion in cash per year (1984) may have been used for the illegal drug trade in the USA. (Subsequent estimates of the overall size of the US drug trade – using different methods - arrived, however, at substantially higher figures).[10] One problem of the currency demand approach is that it cannot distinguish between the shadow economy and money-laundering. Furthermore, cash holdings can be the result of dollar or euro hoarding due to fears of devaluation of other currencies. Moreover, it cannot be applied to countries within a currency zone, such as the euro zone or the West African franc, since the cash supply distribution across countries is no longer known.

Another method was proposed by Quirk,[11] who attempted to estimate the correlation between money-laundering and the demand for money. This method suggested that money-laundering, through its effects on demand, would affect interest rates and exchange rates. An increase in money demand resulting from the need for cash to buy drugs would make money more expensive. This means that the price for money – the interest rate – would go up. Higher interest rates would then attract foreign investors, leading to more capital inflows and exchange rate appreciation. This approach may work for some countries, although higher interest rates and currency appreciations can be the consequence of many other causes. The method would not work to identify the extent of money-laundering for individual countries within a currency zone.

More recent attempts to measure the extent of money-laundering are the so-called *Latent Variable Approaches*. Best known here is the '*dynamic multiple-indicators multiple-causes*' (*DYMIMIC*) model, which uses two sets of observable variables and links them as a proxy to the unobservable variable (the extent of money-laundering). One set of variables reflects the causes for the shadow economy such as regulations, taxation and prosecutions. The other set is called indicators, and measures the effects of the shadow economy on money-laundering. These observable variables parallel money-laundering and include the growing demand for money, less official growth, and/or increases in crime rates. Schneider[12] used this approach to estimate the shadow economy for 145 countries. Schneider and Windischbauer[13] also applied the method to measure the extent of money-laundering. One problem with this approach is that the choice of cause and indicator variables appears to be rather arbitrary and is not necessarily reinforced theoretically. Instead, the DYMIMIC model uses factor analysis to determine how well the different 'cause variables' explain the unobservable variable and those that can be grouped together. The same is then done for the indicator variables. In other

[9] V. Tanzi, *Money Laundering and the International Financial System*, IMF Working Paper, International Monetary Fund, No. 96/55, 1996; V. Tanzi, 'Macroeconomic Implications of Money Laundering,' in E.U. Savona, *Responding to Money Laundering, International Perspectives*, Harwood Academic Publishers, 1997, Amsterdam, pp. 91–104.
[10] ONDCP, *What America's Users Spend on Illegal Drugs*, December 2001.
[11] P. J. Quirk, 'Money Laundering: Muddying the Macroeconomy', *Finance & Development*, 34 (1), (1997), pp. 7–9.
[12] F. Schneider, *Shadow Economies and Corruption All Over the World: New Estimates for 145 Countries*, The Open Access, Open Assessment E-Journal, 2007.
[13] F. Schneider and U. Windischbauer, "Money Laundering: Some Facts," *European Journal of Law and Economics*, 26(3), 2008, pp. 387-404.

words, statistics decide which indicators are used to form the relevant bundle for potential causes and indicators of a shadow economy (or money-laundering). Tedds and Giles (2000) and Schneider (2006) gave a description of this model. A MIMIC model is formulated as follows: ML is the scalar (unobservable) 'latent' variable (the size of money-laundering); y' = (y1, y2, ..., yp) is a vector of 'effects' or 'indicators' of ML; x' = (x1, x2, ..., xq) is a vector of causes of ML. DYMIMIC refers to changes in these variables. Under the assumption that all the elements are normally distributed and uncorrelated, one can estimate money-laundering by regressing the observable causes (or change in causes) on the observable effects (or change in effects). The advantage of this model is that it can be measured for all countries and jurisdictions in the world. Its weakness is that one cannot test the extent to which the model specifications are correct and have anything to do with money-laundering.

Another approach has been chosen by John Walker, who – based on an *input-output model* in combination with a *gravity model* and various *triangulation techniques* - attempted to arrive at a global estimate of money-laundering by measuring illicit flows of money in and out of 220 countries in 1994.[14] In 2006, Unger et al.[15] applied a modified 'Walker model'[16] to estimate money-laundering in the Netherlands. The input-output models have their origins in some of the models originally used to analyse socialist economies – but have also proven useful for estimating the size of illegal drug markets at the regional and subregional level, using triangulation techniques based on expert consistency checks. Newton's gravity model is another theoretical foundation for these estimates. In fact, a number of newer models in international trade theory have shed light on the role of distance and borders, and about the attractiveness of countries for trade, which can also be applied for improving estimates of money-laundering. Once the scale of money-laundering is known, its macroeconomic effects, as well as the impact of crime prevention, regulation and law enforcement effects on money-laundering and transnational crime, can be estimated as well. An IMF Working Group has been trying in recent years to improve the attractiveness indicators of these models and to establish a threat analysis to show which countries are more attractive for launderers due to their specific features (such as financial expertise). The weaknesses of the 'Walker model' are that it depends on a number of assumptions and requires detailed calibration. Moreover, as with any model, the accuracy of its results are difficult to verify.

Further models to estimate the extent of money-laundering are based on observing abnormal prices. Using trade for transferring illicit funds is an old technique. Launderers can create fake high-value invoices and ship merchandise of low value or reverse this procedure as a way of concealing ill-gotten gains. These techniques are known as *trade-based money-laundering*. In June 2008, FATF published a report on Best Practices of Trade-Based Money Laundering,[17] dealing with questions of how trade-based money-laundering can be detected. Economic analysis of trade data can help to develop risk indicators for identifying suspicious trading countries and suspicious merchandise, and for determining the scale of trade-based money-laundering. John Zdanowicz[18] analysed monthly data contained in the United States Merchandise Trade Data Base and identified suspicious merchandise flows, the share of trade

[14] J. Walker, *Estimates of the Extent of Money Laundering in and through Australia*, paper prepared for the Australian Transaction Reports and Analysis Centre, John Walker Consulting Services, Queanbeyan, Australia, September 1995.
[15] B. Unger, J. Ferwerda, W. de Kruijf, G. Rawlings, M. Siegel and K. Wokke, *The Amounts and the Effects of Money Laundering*, report for the Dutch Ministry of Finance, February 2006.
[16] J. Walker and B. Unger, "Measuring Global Money Laundering: The Walker Gravity Model," *Review of Law and Economics*, 5:2, 2009, pp. 821-853.
[17] Financial Action Task Force (FATF), *Best Practices paper on Trade Based Money Laundering*, Paris, June 2008.
[18] J. Zdanowicz, *Trade-Based Terrorist Financing Analysis: Suspicious Trade with Al Qaeda Countries*," International Trade Alert Working Paper, 2005.

subject to money-laundering for each country, and the amount of money-laundering between the USA and countries on the Al-Qaida watch list. He provided both country risk and merchandise risk indices that helped identify the countries and products most vulnerable to money-laundering. His method is valid under the assumption that product prices are normally distributed and that unusual prices have a criminal intention and are not, for example, just booking errors by custom officials. In this model all transactions with a price below the 5% margin or above the 95% margin around the 'usual' prices are classified as trade-based money-laundering attempts. He uses not only country prices, but also world prices and variance measures to determine unusual transactions. An unresolved weakness of this model is that no matter how great the price fluctuations are, the model classifies 10% of all transactions as always suspicious (the upper and lower 5%).

Another evolving approach to measure money-laundering is to use economic theory in combination with simulation techniques. This can help to determine how much rationally acting launderers would launder. In this context, Bagella, Busato and Argentiero[19] developed a theoretical model for estimating money-laundering in Italy by expanding a dynamic two-sector equilibrium model and simulating it for the USA and the EU-15 countries. In this model, agents have the option to work partly in the legal and partly in the illegal economy. They face transaction costs in the legal sector and costs of being detected in the illegal sector. Two types of firms produce a legal good and an illegal good with two different technologies. The government sets fines, can influence the probability of detection, and can influence the liquidity (money supply) of the economy, although there is a liquidity constraint. If households want more liquid funds, they must engage in the illegal sector. The 'optimal' money laundered depends on the labour allocated to the legal and illegal sector and on the prices and quantities of both goods. The model forecasts the development of the legal and illegal sectors, and the attractiveness of the model lies in the possibility to compare the model's forecasts of the licit economy with its actual development. One can thus see how well the model predicts the observable part of the economy. Assuming that the same good fit holds for the unobservable part of the illegal sector, one can use the theoretical finding for the illegal sector as a measure of money-laundering.

b) Analysis of previous estimates

A number of results will be discussed in this sub-chapter to help get a better understanding of the likely magnitudes involved. One caveat should be made, however. As Peter Reuter once remarked, after having studied the phenomenon and the various proposed methods for years: "*The review of the … methods comes to a simple conclusion: neither yields estimates of the volume of laundered money that can be considered as anything more than an indicative order of magnitude.*" But he went on to state that "*Such figures are useful to confirm that the phenomenon of money laundering is of sufficient scale to warrant public policy attention…*" and that "*Such a negative assessment … does not imply an endorsement of policymaking by anecdotes… To the contrary, a recurring theme… is that better use could and should be made of available data …, and greater thought should be given to collecting and assembling relevant statistics that aid policymakers.* "[20]

[19] M. Bagella, F. Busato and A. Argentiero, "Money Laundering in a Microfounded Dynamic Model: Simulations for the U.S. and the EU-15 Economies," *Review of Law and Economics*, 5(2), 2009, Article 4.
[20] P. Reuter and E. M. Truman, *Chasing Dirty Money – The Fight against Money Laundering*, Washington D.C., 2004, p. 12.

i) FATF estimates

One of the first estimates on the extent of illicit financial flows and related money-laundering came from the Financial Action Task Force (FATF), which was founded in 1989 by the G-7 to help tackle the threats posed by money-laundering for the international banking system.[21] The starting point for their estimate were the drug sales in the USA and Europe. The FATF estimated drug sales in the late 1980s at some US$124 bn, of which they estimated that some US$85 bn (equivalent to 0.8% of the gross domestic product (GDP) in the USA and Europe, or 0.5% of global GDP) would have been available for money-laundering. Assuming that drug sales may have accounted for a quarter of global illegal proceeds, FATF estimated the total amounts laundered at some 2% of global GDP.[22] Based on 2009 GDP data,[23] this would have been equivalent to some US$1.2 trillion.

FATF estimate of money-laundering (1988)

Amounts estimated to have been laundered (1988)	As a percentage of global GDP
US$0.34 trillion	2.0%

Source: International Monetary Fund, Financial System Abuse, *Financial Crime and Money Laundering- Background Paper*, February 12, 2001.

Over the 1996-2000 period, the FATF tried to develop a more scientific basis for this estimate and invited all major actors in this field to a number of expert group meetings and workshops.

Peter Reuter, one of the authors involved in the final study to produce a more scientific estimate on the amounts globally laundered, had to admit, however, that the attempt failed in 2000.[24] This was mainly due to the unavailability of appropriate data and information, despite the participation of the main national, regional and global institutions and experts in this exercise over the 1996-2000 period. This underlined the extreme difficulties to estimate – with any level of accuracy and scientific rigour - how much 'dirty money' is being generated and laundered.

The FATF issued a general recommendation that countries should estimate the funds generated from crime and the extent to which these funds are being laundered on a national basis. Only a few countries, however, have subsequently undertaken such an exercise.

ii) IMF estimates

The most frequently quoted estimate on the extent of money-laundering at the global level is an estimate provided by the head of the International Monetary Fund in the mid-1990s. This suggested that the extent of money-laundering (that is, of income derived from illicit sources) was equivalent to between 2% and 5% of global GDP. This would have been between US$0.6 – US$1.5 trillion in 2006[25] and – assuming the proportions remained unchanged – between

[21] FATF, History of the FATF, http://www.fatf-gafi.org/pages/0,3417,en_32250379_32236836_1_1_1_1_1,00.html

[22] "Another approach to estimating the magnitude of financial abuse uses information about expenditures and prices involved in criminal activity that has been collected in the course of law enforcement (micro-data). The most publicized of such estimates have been for global money-laundering by the FATF. On the basis of information about final sales of some illegal drugs (about US$120 billion a year in the United States and Europe in the late 1980s) and extrapolating worldwide and generalizing to include all drugs, and subsequently assuming that 50-70 percent of that amount would be laundered, the FATF estimated that money-laundering could reach about 2 percent of global GDP." (International Monetary Fund, financial System Abuse, *Financial Crime and Money Laundering- Background Paper*, February 12, 2001.)

[23] According to the World Bank, the current global gross domestic product amounted to US$58.14 trillion in 2009 (World Bank, *The World at a Glance – Key development indicators from the World Bank*, March 2011).

[24] Peter Reuter and Edwin M. Truman, *Chasing Dirty Money – The Fight against Money Laundering*, Washington D.C., 2004, p. 9.

[25] OECD Observer, "Ten years of combating money laundering", *OECD Observer* No 217-218, Summer 1999.

US$ 0.9 and US$ 2.3 trillion in 2005 (with a 'best estimate' of around US$1.5 trillion)[26] and between US$1.2 and US$2.9 trillion in 2009, with a mid-point estimate of around US$ 2 trillion (based on a global GDP to US$ 58.2 trillion in 2009).

IMF estimates of money laundered (1998)

	Minimum	Maximum	Mid-point
IMF estimates of money laundered as a percentage of global GDP	**2%**	**5%**	**3.5%**
Estimate for 1996 in trillion US$	0.6	1.5	1.1
Estimate for 2005 in trillion US$	0.9	2.3	1.5
Estimate for 2009 in trillion US$	**1.2**	**2.9**	**2.0**

Source: OECD Observer, "Ten years of combating money laundering", *OECD Observer* No 217-218, Summer 1999.

The 2% to 5% of global GDP estimate was apparently first cited by then managing director of the IMF Michel Camdessus in 1998, as a 'consensus range' of the likely scale of money-laundering transactions at the global level.[27] The 'consensus range' has been, inter alia, also cited in the World Bank's *Reference Guide to Anti-Money Laundering and Combating Financing of Terrorism*.[28] A problem with this widely quoted figure has been the lack of supporting material and methodology documenting how it was established,[29] though - according to the World Bank - it dates back to research undertaken by Vito Tanzi and published in an IMF working paper in 1996.[30]

iii) National estimates

Only a few estimates on the extent of crime-related proceeds at the national level exist so far. These estimates also tend to be heterogeneous in terms of items included and the way the results are generated, which limits direct comparability. Nonetheless, they still provide some valuable ideas of the likely magnitudes involved.

United States

One set of estimates for the USA has been presented by Peter Reuter. These estimates on the generation of illegal income, including tax evasion, suggest that earnings from criminal activities increased in nominal terms over the last few decades to some US$780 billion (bn), though – after an initial rise between 1965 and 1985 - they remained stable over the 1985-2000 period if expressed as a proportion of GDP. Excluding tax evasion, criminal income increased from 2.5% of GDP in 1965 to 4% in 1985 (in line with the massive increase in drug consumption and trafficking over that period) but then gradually declined to 2.3% of GDP by 2000 (which also appears to be linked to the subsequent fall in drug use, notably the use of cocaine and related falls in acquisitive crime and trafficking over the 1985-2000 period). The proportion of overall criminal income (some US$220 bn in 2000) to total illicit income

[26] B. Unger, *The Scale and Impacts of Money Laundering* (Edward Elgar Publishing Limited), Cheltenham, UK, 2007, p. 80.
[27] Mr. Michel Camdessus said in a speech ("*Money Laundering: the Importance of International countermeasures*") at the Plenary Meeting of the Financial Action Task Force on Money Laundering on February 10, 1998: *"I hardly need say that the IMF regards the anti-money laundering actions advocated by the FATF as crucial for the smooth functioning of the financial markets. While we cannot guarantee the accuracy of our figures —and you have certainly a better evaluation than us—the estimates of the present scale of money laundering transactions are almost beyond imagination—2 to 5 percent of global GDP would probably be a consensus range….*" International Monetary Fund, "Money Laundering: the Importance of International Countermeasures", Paris February 10, 1998 http://www.imf.org/external/np/speeches/1998/021098.htm
[28] World Bank, *Reference Guide to Anti-Money Laundering and Combating Financing of Terrorism*, Washington (2nd edition), 2006, p. 1-6.
[29] F. Schneider, Money *Laundering: some Preliminary Findings*, Oct. 2007, http://www.awi.uni-heidelberg.de/with2/seminar/WS%200708/Schneider_Money%20Laundering_102007.doc; see also .
[30] V. Tanzi, "Money Laundering and the International Finance System", *IMF Working Paper* No. 96/55, May 1996.

(including tax evasion of some US$780 bn) fell from almost half in 1985 to less than a third two decades later and to less than 30% in 2010.

Assuming that the proportion for crime-related income (2.3% of GDP) remained largely stable over the subsequent decade – which can be assumed as no increase in crime was reported - the criminal income in 2010 (excluding tax evasion) may have amounted to some US$ 350 bn in the world's largest national economy. This would probably be the upper limit estimate. A lower limit estimate – assuming that the nominal increases found over the 1990-2000 period continued unchanged over the 2000-2010 period, would result in an estimate of around US$235 bn for the year 2010 or 1.6% of GDP. A mid-point estimate would show criminal income of some US$300 bn (rounded) or 2% of GDP for 2010.

Estimated earnings from criminal activity* in the United States, billions of current US$ (1965-2010)

	Tax evasion included		Criminal income (tax evasion excluded)		
	Estimated criminal income	in % of GDP	Estimated criminal income	in % of GDP	Ratio of criminal income in total illicit income
1965	49	6.8%	18	2.5%	37%
1970	74	7.1%	26	2.5%	35%
1975	118	7.2%	45	2.7%	38%
1980	196	7.0%	78	2.8%	40%
1985	342	8.1%	166	4.0%	49%
1990	471	8.1%	209	3.6%	44%
1995	595	8.0%	206	2.8%	35%
2000	779	8.0%	224	2.3%	29%
2010**			300 (235 –350)	2.0% (1.6%-2.3%)	

* Criminal activities included: trafficking in illicit drugs, human trafficking, burglary, larceny-theft, motor vehicle theft, robbery, fraud, arson, non-arson fraud, counterfeiting, illegal gambling, loan sharking and prostitution. Tax evasion crimes included federal income, federal profits and excise tax evasion.
** Tentative UNODC estimate based on previous estimates and trends derived from new drug and crime data.

Source: Peter Reuter, "*Chasing Dirty Money – the Fight against Money Laundering,*" Washington 2004; based on Office of National Drug Policy (2000 and 2001); Simon and Witte (1982); GAO (1980); Federal Bureau of Investigations' annual *Uniform Crime Reports;* Internal Revenue Service; International Organization on Migration; Abt. Smith, and Christiansen (1985); Kaplan and Matteis (1967), Carlson *et al*. (1984) and Key (1979).

A detailed breakdown for the various criminal proceeds in the USA, provided by Reuter for the year 1990, showed that tax evasion accounted for more than half of the total illegal proceeds. Drug trafficking accounted for around one fifth of global illegal proceeds, followed by fraud (around one eighth). The other crimes were far less important. Excluding tax evasion, drug trafficking would have been responsible for almost half (47%) and fraud for more than a quarter (28%) of the total. While tax evasion, drugs and fraud are likely to continue to play important roles for overall criminal proceeds, one can assume that other crimes have gained in importance over the last two decades and would now appear higher on the list.

Estimated unlawful earnings, including criminal proceeds, in the United States (1990)

	Proceeds in billion of current US$	in % of total	in % of total
Tax evasion	262.2		55.7%
Drug trafficking			
Cocaine trafficking	61.3	13.0%	
Heroin trafficking	17.6	3.7%	
Marijuana trafficking	13.5	2.9%	
Other drug trafficking	4.8	1.0%	
Subtotal drug trafficking			20.6%
Fraud	59.3		12.6%
Prostitution	14.7		3.1%
Loan sharking	14.0		3.0%
Motor vehicle theft	8.0		1.7%
Illegal gambling	7.6		1.6%
Larceny/theft	3.8		0.8%
Burglary	3.5		0.7%
Robbery	0.5		0.2%
Human trafficking	0.2		0.04%
Counterfeiting	0.1		0.02%
Fraud arson	0.04		0.008%
Total	**471.1**		**100.0%**
As a percentage of GDP	**8.1%**		

Source: Peter Reuter, "*Chasing Dirty Money – the Fight against Money Laundering*", Washington 2004; based on Office of National Drug Policy (2000 and 2001); Simon and Witte (1982); GAO (1980); Federal Bureau of Investigations' annual *Uniform Crime Reports;* Internal Revenue Service; International Organization on Migration; Abt. Smith, and Christiansen (1985); Kaplan and Matteis (1967), Carlson *et al*. (1984).

In fact, estimates of the size of the US drug market for the year 2000 showed a total figure of US$64 bn, down from US$115 bn, expressed in constant 2000 dollars.[31] Expressed as a percentage of GDP, the size of the US drug market declined from 1.7% in 1990 to 0.6% in 2000. This decline was due to overall lower quantities of drugs consumed in the USA (as many heavy users either received treatment or were imprisoned for drug dealing) as well as a decline in drug prices in the 1990s as a consequence of more competition in the drug markets, following the dismantling of the big Colombian drug cartels.

The proceeds from other crime, expressed as a percentage of GDP, also declined. This was linked to lower consumption of drugs (notably of cocaine and crack-cocaine) and lower levels of all forms of acquisitive crime (including burglaries, larceny-theft and motor vehicle theft) and violent crime, including robberies and homicides. Crime rates continued to decline further in the first decade of the new millennium, but these declines were less pronounced than in the 1990s.[32]

The overall illicit drug market - in nominal terms – appears to have remained stable in the first decade of the new millennium, as prices and prevalence rates did not change significantly. Reported drug use prevalence rates increased from 2000-2002, due to improvements in survey methodology, then fell until 2008 and rose again in 2009. Over the 2002-2009 period, drug use was basically stable,[33] and the same probably applies to the 2000-2009 period once result

[31] ONDCP, *What America's Users Spend on Illegal Drugs*, Washington D.C, December 2001, p. 3.
[32] FBI Uniform Crime Reports, quoted in UNODC, *2010 World Drug Report*, Vienna 2010, p. 82
[33] The reported annual prevalence rate of drug use in the USA in the population aged 12 and above rose from 11.0% in 2000 to 14.9% in 2002 – mainly due to changes in methodology. The prevalence rate then fell over the subsequent years to 14.2% by 2008 before increasing again to 15.1% in 2009, mainly due to an increase in cannabis consumption in parallel with the referendum on cannabis legalisation in California in 2010. Excluding cannabis, the annual prevalence of drug use fell from

changes due to methodological improvements are accounted for.[34] Significant changes over the last decade were only reported for cocaine. In this case, significant declines in the quantities of cocaine reaching the US market over the 2006-2010 period were largely offset by higher cocaine prices, resulting in a rather stable cocaine market in financial terms. Assuming that the size of the US drug market remained in nominal terms unchanged, it would have decreased from 0.7% of GDP in 2000 to 0.4%-0.5% of GDP by 2009/2010.

Estimates of the US drug market, billions of constant 2000 US$ (1990-2000)

	1990	1995	2000
Cocaine	69.9	40.0	35.3
Marijuana	15.0	10.2	10.5
Heroin	22.5	13.2	10.0
Methamphetamine	5.7	9.2	5.4
Other drugs	2.2	2.7	2.4
Total (rounded)	115	75	64
In % of GDP	1.6%-1.7%	0.9%	0.7%

Source: ONDCP, *What America's Users Spend on Illegal Drugs*, Washington D.C, December 2001, p. 3.

Estimates of criminal proceeds in current US$ (1990-2010)

	1990	1995	2000	2010*
Drugs	97	69	64	64
in % of GDP	1.7%	0.9%	0.7%	0.4%
Other crime (excl. tax evasion)	112	137	160	236
In % of GDP	1.9%	1.9%	1.6%	1.6%
Total (excl. tax evasion)	209	206	224	300 (235-350)
In % of GDP	3.6%	2.8%	2.3%	2.0% (1.6%-2.3%)

* Tentative UNODC estimates based on previous estimates and trends derived from drug and crime data
Sources: Peter Reuter, "*Chasing Dirty Money – the Fight against Money Laundering*", Washington 2004, p. 20 and ONDCP, *What America's Users Spend on Illegal Drugs*, Washington D.C, December 2001, p. 3.

United Kingdom

The Office of National Statistics estimated the 'value-added' of criminal activities in the late 1990s. This study – looking at drugs, prostitution, selling of stolen goods and illicit gambling - resulted in estimates of the 'value added' of some US$10 bn - US$17 bn in 1996, equivalent to 0.9% - 1.5% of GDP. The bulk was drug-related. The 'value-added' of illicit drug sales alone was equivalent to between 0.5% and 1.1% of GDP.[35] In comparison, data for the USA for 1990 showed drug sales as equivalent to some 1.7% of GDP. The size of the prostitution

8.7% in 2002 to 8.0% in 2008 before rising again to 8.3% in 2009. The latter increase was, however, statistically not significant.
(SAMHSA, *Household Survey on Drug Use and Health*, 2009 and previous years).

[34] Due to a number of changes, the response rate could be raised (for example, by paying participants a fee of US$30 which increased the readiness of many drug users to participate in the survey). The data were then no longer directly comparable with previous results. A number of other data reported by SAMHSA suggested that overall drug use rates remained largely unchanged over the 2000-2002 period (SAMHSA, *Results from the 2002 National Survey on Drug Use and Health: National Findings*, Rockville MD, Sept. 2003).

[35] Chris Groom and Tom Davies, "Developing a Methodology for Measuring Illegal Activity for the UK National Accounts," *Economic Trends, no. 536, July* 1998, pp. 33-71.

market or illicit gambling, in contrast, was very similar to that found in the USA, expressed as a proportion of GDP.

Estimates of value added of selected consumers' expenditure for illegal activities in the UK (1996)

	'Value added' (in billion £)	in % of 1996 GDP
Drugs	3.9 – 8.5	0.5% – 1.1%
Prostitution	1.2	0.2%
Selling of stolen goods	0.7	0.1%
Illegal gambling	0.8	0.1%
Total in billion £	6.5 – 11.1	0.9% - 1.5%
Total in billion US$	10.2 – 17.3	

Source: Chris Groom and Tom Davies, "Developing a Methodology for Measuring Illegal Activity for the UK National Accounts,".*Economic Trends, no. 536,* July 1998, pp. 33-71.

Subsequent studies on the size of the UK illicit drug market confirmed the initial range. The total size of the UK market in 2003/2004 was estimated at £5.3 billion (range: £4.0–£6.6 bn).[36] Expressed as a proportion of GDP, the drug market estimate declined, however, to 0.5% (range: 0.4%-0.6% of GDP). The size of the drug market was thus – in relative terms – slightly smaller than that of the USA.

Estimates of the UK drug market, (2003/2004)

	England and Wales			UK		
	Aggregate street quantity (tonnes)	Aggregate pure quantity (tonnes)	Aggregate expenditure (£million)	Aggregate street quantity (tonnes)	Aggregate pure quantity (tonnes)	Aggregate expenditure (£million)
Cannabis	360.33 ±135.81	360.33 ±135.81	900.8 ±372.4	412.41 ±155.44	412.41 ±155.44	1031.0 ±432.5
Ampheta-mines	32.68 ±17.33	3.60 ±2.31	277.8 ±72.9	36.70 ±19.46	4.04 ±2.60	312.0 ±81.9
Ecstasy (millions of tabs)	52.79 ±23.84	13.72 ±8.14	237.5 ±76.2	59.52 ±26.88	15.47 ±9.18	267.8 ±85.9
Powder cocaine	15.7 ±12.17	7.85 ±6.16	863.4 ±237.1	17.70 ±13.72	8.85 ±6.94	973.3 ±267.3
Crack	13.79 ±11.76	8.96 ±7.71	1309.8 ±348.9	15.58 ±13.29	10.13 ±8.71	1480.4 ±394.29
Heroin	17.60 ±13.14	7.04 ±5.32	1055.9 ±199.2	20.11 ±15.02	8.04 ±6.13	1206.7 ±227.65
Total market value (£bn)			4.645 ±1.154			5.271 ±1.310

Source: Stephen Pudney et al, Institute for Social and Economic Research, University of Essex,,"Estimating the size of the UK illicit drug market", in Home Office, "Measuring different aspects of problem drug use: methodological developments", *Home Office Online Report* 16/06, p. 76.

Australia

Estimates of criminal proceeds generated in Australia have been calculated by John Walker (originally for the Australian Institute of Criminology in 1992, updated in 1998). He arrived at figures ranging from US$7 bn - US$13 bn, equivalent to between 1.9% and 3.6% of GDP in 1998. These figures were based on estimates of the total number of crimes committed in a year and an analysis on the average cost of such crime per case. Tax evasion was not

[36] Stephen Pudney et al, Institute for Social and Economic Research, University of Essex,,"Estimating the size of the UK illicit drug market", in Home Office, "Measuring different aspects of problem drug use: methodological developments", *Home Office Online Report* 16/06, pp. 46–120.

considered. The overall rather high figures (the midpoint estimates for criminal income as a percentage of GDP of 2.8% were higher than the estimates for the USA) were mainly due to high estimates for the criminal income from fraud. According to these estimates, fraud accounted for between 60% and 66% of total criminal proceeds in Australia in 1998.

A subsequent update based on new data in 2003, applying the same methodological approach, arrived at total estimates of some US$7 bn - US$8 bn, equivalent to some 1.5% of GDP (range:1.4–1.6% of GDP), that is, lower than the US estimates. The difference between the 1998 and 2003 estimates was mainly due to far lower estimates for the criminal income from fraud. Estimates for most of the other crime categories increased. Nonetheless, fraud appears to have generated the highest proportion of total criminal proceeds in Australia (27% of the total), followed by income from illicit drug trafficking (15-18% of the total).[37] Drug-related income was equivalent to some 0.3% of GDP, and thus lower than in the United States and the UK.

Estimated criminal proceeds in Australia, million $A (1998 and 2003)

	1998		2003 (revised estimates)		Mid-point estimates in % of GDP	
	min	max	min	max	1998	2003 (rev.)
Fraud	6,710	13,770	3,000	3,500	1.8%	0.4%
Drugs	1,200		2,000		0.2%	0.3%
Theft	1,232	2,712			0.3%	
Shoplifting			1,020	2,460		0.2%
Car theft			654			0.1%
Stealing from persons			545			0.1%
Other theft			659			0.1%
Burglaries (breaking and entering)	893		1,193		0.2%	0.2%
Assaults	331		979		0.1%	0.1%
Homicide	275		323		0.0%	0.0%
Property damage	525	1,645	510		0.2%	0.1%
Robbery and extortion	93		37		0.0%	0.0%
Total in million $A	11,259	20,919	10,920	12,860	2.8%	1.5%
Total in billion US$	7.1	13.1	7.1	8.3		
in % of GDP	1.9%	3.6%	1.4%	1.6%		

Source: Data based on John Walker, 1998 and 2003 (updates from an original paper undertaken by John Walker for the Australian Institute of Criminology in 1992), quoted in Brigitte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 62.

[37] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 61-62.

Netherlands

Estimates of unlawful earnings in the Netherlands for the year 2003, based on a number of studies collected by Unger, amounted to between US$13.5 bn and US$22.3 bn, equivalent to some 3.5% of GDP (range: 2.6%- 4.3%); much smaller than the overall estimates for the USA. By far the largest components were related to financial fraud, tax evasion and social security fraud. Together, these categories accounted for some 73% of the total unlawful earnings, that is, an even higher proportion than was reported for these items in the USA. The next largest sources of criminal income were related to drugs: 10% - 16% of total unlawful earnings.[38] Total drug-related income would have been equivalent to 0.4% of GDP, that is, more than in Australia but less than in the USA or the UK.

Estimated unlawful earnings in the Netherlands, million € (2003)

	Proceeds of crime, million €	Mid-point estimates in % of total
Financial, social security and tax	7,735 – 15,450	73.3%
Drugs	1,960	12.4%
Illegal workers	490	3.1%
Prostitution	460	2.9%
Theft	345	2.2%
Burglary	340	2.1%
Fencing	190	1.2%
Illegal gambling	130	0.8%
Illegal copying	90	0.6%
Computer-crime	26	0.2%
Violent offences	6	0.0%
Other offences	187	1.2%
Total in million €	11,959 - 19,674	
Total in billion US$	13.5 – 22.3	
As a percentage of GDP	2.6% - 4.3%	

* based on the assumption that between 5% and 10% of the total amounts were discovered and reported.
Source: B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 66, based on studies by Smekens and Verbruggen (2004), Business criminality: Criminaliteit en rechtshandhaving (2001), WODC (2003, p. 60) and NIPO (2002).

Germany

A detailed study on criminal proceeds was also undertaken for Germany and reported by the IMF in its 2010 Assessment Report on Germany. The study suggested that total unlawful proceeds amounted to some US$80 bn in 2007/2008, equivalent to 2.3% of GDP, that is, clearly less than in the USA and slightly less than in the Netherlands. The largest source of unlawful income in Germany was tax and excise evasion (44% of the total), followed by fraud (18%), robberies and thefts (16%) and drugs (15%). Excluding the tax and excise evasions, criminal proceeds amounted to some US$45 bn in 2007/2008, equivalent to 1.3% of GDP, that is, slightly less than the estimates reported for Australia. The largest components of criminal proceeds in Germany came from financial fraud (31% of the total), robberies and thefts (28%) and drug trafficking-related income (27%). Drug-related income amounted to between 0.3% and 0.4% of GDP, that is, less than in the USA or the UK, and marginally less than in the Netherlands.

[38] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 65-66.

Estimated unlawful earnings, including criminal proceeds, Germany (2007/2008)

	Recorded crimes	Estimated loss or profit(b) (€ billion)	Other proceeds or profit estimates (c) (€ billion)	Baseline estimate (€ billion)	Unreported crime adjusted estimate(d) (€ billion)	Baseline estimate (US$ billion)	Unreported crime adjusted estimate (US$ billion)	in % of total unlawful earnings
Robberies and thefts	2,614,640	3.601		3.601	9.003	5.012	12.529	15.8%
Fraud	912,899	2.372	4.00(e)	4.000	10.000	5.567	13.917	17.5%
Drugs	248,355		8.794(f)	8.794	8.794	12.239	12.239	15.4%
Human trafficking			0.037	0.037	0.093	0.052	0.1299	0.2%
Arms trafficking			0.005	0.005	0.012	0.006	0.016	0.0%
Sexual crimes			0.032	0.032	0.081	0.045	0.113	0.1%
Counterfeiting and piracy of products			0.029	0.029	0.071	0.040	0.099	0.1%
Environmental crime	16,528		0.002	0.002	0.005	0.003	0.007	0.0%
Insolvency	5,484							0.0%
Tax and excise evasion			25.00(g)	25.000	25.000	34.793	34.793	43.8%
Offences against commercial legislation	7,802	1.609		1.609	4.023	2.239	5.598	7.0%
Other crimes			0.021	0.021	0.053	0.030	0.074	0.1%
Total unlawful earnings	6,284,661	7.583	37.920	43.130	57.135	60.025	79.514	100.0%
Percentage of		0.3%	1.6%	1.8%	2.3%			
Crime excl. tax evasion			12.920	18.130	32.135	22.232	44.721	
Percentage of GDP			0.5%	0.7%	1.3%			
Memorandum items: - Money-laundering offences	3,923							
- Economic crimes	87,934		4.200	4.200	10.500			
- Organized crime			0.663	0.663	1.658			

Notes:
(a) Sources: National crime statistics 2007, Situation Report on Economic Crime in the Federal Republic of Germany, 2007. Narcotic Drugs Annual Report 2007. Organized Crime Situation Report 2008. All published by the BKA.
(b) Takes estimate from BKA crime statistics and apportions it upwards for incomplete investigations.
(c) Unless otherwise noted, these figures are calculated by apportioning estimated profits from organized crime to the crime categories that organized crime was identified as being involved in.

(d) Assumes actual crime is at least 2–3 times reported crime. An analysis of Germany data contained in the UN's 2004–2005 International Crime Victim's Survey and the 2005 European Survey on Crime and Safety provides the following justification for this assumption. The number of victims of profit generating crimes with common titles in the Germany criminal statistics ranged from 2.6 times the recorded level of crime for theft of motor vehicles to 11 times the number of reported crimes for consumer fraud with an average of 7.7. While some of this discrepancy can be explained by some recorded crimes having multiple victims, it lends weight to scaling up the amount of recorded crime by a factor of 2 or 3 to obtain a more realistic picture of actual crime.
(e) Industry estimate of insurance fraud only, conveyed to assessors during on-site mission.
(f) Derived from United Nations Office on Drugs and Crime, *2005 World Drug Report*, estimates of the value of retail drug markets.
(g) Based on Finance Minister estimate Bach/Dwenger, *"Unternehmensbesteuerung: Trotz hoher Steuersätze nur mäßiges Aufkommen"*, DIW-Wochenbericht Nr. 5/2007, S. 63 ff.), that total tax avoidance and evasion amounts to € 100m per annum. Table assumes 25% is illegal tax and excise evasion.

Sources: FATF, Germany – Mutual Evaluation Report, February 2010 and International Monetary Fund, March 2010, and International Monetary Fund , "Germany: Detailed Assessment Report on Anti-Money Laundering and Combating the Financing of Terrorism", *IMF Country Report* No. 10/78, Washington D.C., February 2010, p. 24. and Statistisches Bundesamt, Wiesbaden.

Italy

A number of estimates related to the income of organized crime have been published for Italy in recent years. One of the most prominent institutions is SOS Impresa. This association, created in 1991 in Palermo (Sicily) by a number of businesspeople to defend themselves against mafia protection rackets, generated an estimate of the gross income of organized crime in Italy of €135 bn or US$189 bn for the year 2009, equivalent to 8.9% of GDP. This would be far more than the estimates for any other developed country, about four times the overall crime related proportion of GDP calculated for the United States (for the year 2000). Deducting various expenditure items, the overall profits of organized crime were estimated at some €78 bn or US$109 bn, equivalent to 3.8% of GDP.[39]

[39] SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese* (Sintesi per la Stampa), Rome, 27 January 2010.

Estimates of the income and profits of organized crime in Italy (2009)

Income	In billion €		Expenditure	In billion €	
Trafficking drugs	60.00		bosses/management	0.60	
Trafficking in human beings	0.87		affiliated members	0.45	
Arms trafficking	5.80		arrested persons	0.09	
Smuggling	1.20		fugitives	0.03	
Subtotal trafficking		67.87	Subtotal 'salaries'		1.17
Protection racket	9.00		hiding places	0.10	
Loan sharking (usury)	15.00		networks	0.10	
Subtotal 'predatory activities'		24.00	weapons	0.25	
Theft and robbery	1.00	1.00	Subtotal 'logistics'		0.45
Procurement	6.50		corruption	0.95	
Agro-crime	7.50		consultants and specialists	0.05	
Games and gambling	2.50		supporters	1.75	
Counterfeiting	6.50		Subtotal 'corruption'		2.75
Illegal construction	2.00		legal fees	0.80	0.80
Subtotal - illegal economic activities		25.00	investment	26.00	26.00
Ecomafia / agromafia	16.00	16.00	money-laundering	19.50	19.50
Prostitution	0.60	0.60	provisions (reserve)	6.50	6.50
Financial gains	0.75	0.75			
Total income in bn €	**135.22**	**135.22**	**Total expenditure in bn €**	**57.17**	**57.17**
			Profits in bn €	**78.05**	**78.05**
Total income in bn $US		**188.58**	**Profits in bn $US**		**108.85**
Total income % of GDP		**8.9%**	**Profits in % of GDP**		**3.8%**

Source: SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese*, Rome, 27 January 2010.

Italy has a significant organized crime sector, likely among the largest in Europe. Nonetheless, how realistic are estimates suggesting that organized crime proceeds are close to 9% of GDP in Italy?

The bulk of the organized crime income (44%) was estimated to stem from drug trafficking activities. SOS Impresa estimated that €60 bn, or 3.9% of GDP, was drug-related. Studies in other developed countries as well as other studies in Italy suggest that the estimates of drug-related income are – most probably - gross over-estimates. Other estimates of the Italian drug market were far lower, ranging from €6.3 bn (0.4% of GDP in 2005) to €11.4 bn (0.7% of GDP in 2008).[40] Such estimates would be more in line with drug market estimates from other developed countries, ranging from 0.3% of GDP (Australia in 2003) to 0.7% of GDP (USA in 2000). In fact, there are no indications that the Italian drug market would be substantially larger than the drug markets in the USA or the UK. Moreover, the primary market for Italian organized crime is still Italy. There are no indications that Italian organized crime dominate the drug business in other European countries, despite some involvement.

[40] Consicglio Italiano per le Scienze Sociali, *Il mercato illecito della droga e le sue possibile regolamentazioni*, Rome 2010.

Estimates of the size of the Italian drug market

	Baldassarini, Corea (2005)	Canzonetti (2008)[a]	Canzonetti (2008)[b]	SOS Impresa, (2009)
in billion €	6.3	9.6	11.4	60.0
in billion US$	7.8	14.1	16.8	83.7
in % of GDP	**0.4%**	**0.6%**	**0.7%**	**3.9%**

a) without taking polydrug use into account
b) taking poly-drug use into account
Sources: Consicglio Italiano per le Scienze Sociali, *Il mercato illecito della droga e le sue possibile regolamentazioni*, Rome, 2010 and SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese*, Rome, January 2010.

Valuation of the Italian drug market in million €* (2008)

	Drug users			Valuation in million €		
	problem	regular	occasional	problem	regular	occasional
Heroin	246,872	143,383	14,291	1,571	365	44
Cocaine	270,496	573,459	573,594	2,776	2,354	283
Cannabis	181,435	2,899,087	2,962,217	780	2,493	306
Others	9,880	166,006	453,754	44	297	96
Total	708,683	3,781,935	4,132,856	5,171	5,509	729
TOTAL				**11,409**		

* taking poly-drug consumption into account
Source: A. Canzonetti, quoted in Consicglio Italiano per le Scienze Sociali, *Il mercato illecito della droga e le sue possibile regolamentazioni*, Rome, 2010.

Assuming that SOS Impresa has over the years acquired expertise on the involvement of organized crime in business-related areas while drug researchers have a better understanding of illegal drug markets, the total proceeds of the organized crime sector could have amounted to some US$120 bn, equivalent to 5.7% of GDP.[41] Deducting the expenditures identified above, the remaining profits for organized crime in Italy would still be substantial, some US$43 bn or 1.9% of GDP.

Estimates of organized crime proceeds and profits in Italy (2009)

	Drugs (in bn €) (Canzonetti)	Other organized crime income (SOS impresa) (in bn €)	Total in bn €	Total in US$	As a percentage of GDP
Crime proceeds	11.4	75.2	**86.6**	**120.8**	**5.7%**
Less expenditure			57.2	78.1	
Profits			**29.4**	**42.7**	**1.9%**

Sources: Consicglio Italiano per le Scienze Sociali, *Il mercato illecito della droga e le sue possibile regolamentazioni*, Rome, 2010 and SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese*, Rome, January 2010.

Excluding its involvement in trafficking of drugs, arms and human beings, the proceeds generated by organized crime in Italy – based on SOS Impresa estimates – appear to have

[41] The calculations shown in the table may be interpreted to suggest that total drug sales go to organized crime in Italy. This is not true. At first sight, the calculations would appear to lead to an over-estimation of the total income of organized crime. However, one must also take into account that Italian organized crime participates to some extent in the drug business in other European countries as well. These values are missing here. In other words, the calculations assume that the amounts of drugs sold by Italian organized crime abroad are similar in magnitude to the drugs sold by individuals, not participating in organized crime, in Italy.

decreased in recent years, from a total of €91 bn in 2006 to €56 bn in 2009, that is, from figures equivalent to 6.1% of GDP to 3.7% of GDP. This decline was mainly due to new, lower estimates of organized crime proceeds from loan sharking, illegal construction as well as for theft and robberies. Income from other criminal sources appears to have remained largely stable. Between 2007 and 2009 (the year of the financial crisis) the estimates show, however, a small increase, suggesting that Italian organized crime benefited from the crisis.

SOS Impresa also tried to gauge the involvement of organized crime in the various criminal sectors. While some crime sectors are thought to be controlled by organized crime, such as protection racketeering or public procurement, organized crime is believed to play less of role in other sectors such as theft and robberies (15%). The overall estimates by SOS Impresa suggest that the bulk - some 57% - of the total crime proceeds (excluding trafficking) go to organized crime in Italy.

Estimates of criminal proceeds, excluding trafficking, in Italy, billion € (2006-2009)

	Organized crime			Total crime	Proportion of organized crime in total crime
	2007 report	2008 report	2010 report	2010 report	
Loan sharking	30.0	12.6	15.0	40.0	38%
Protection racketeering	10.0	9.0	9.0	9.0	100%
Theft and robbery	7.0	1.0	1.2	8.0	15%
Fraud	4.6	4.6	4.6	4.6	100%
Smuggling	2.0	1.5	1.2	1.5	80%
Counterfeiting	7.4	6.3	6.5	8.0	81%
Illegal construction	13.0	2.0	2.0	10.0	20%
Eco- / agro-mafia	7.5	7.5	7.5	7.5	100%
Public procurement	6.5	1.2	1.2	1.2	100%
Private contracts and supplies (buildings)		5.3	5.3	5.3	100%
Games and gambling	2.5	2.4	2.5	3.0	83%
Total	**90.5**	**53.4**	**56.1**	**98.1**	**57%**
Assumed reference year	2006	2007	2009	2009	
As a percentage of GDP	**6.1%**	**3.5%**	**3.7%**	**6.5%**	

Sources: SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese*, Rome, January 2010; SOS Impresa, *XI Rapporto – Le mani della criminalità sulle imprese*, Rome, November 2008; SOS Impresa, *X Rapporto – Le mani della criminalità sulle imprese*, Rome, October 2007.

Total crime, excluding trafficking, is thought to generate close to €100 bn in proceeds, equivalent to 6.5% of GDP. If estimated trafficking proceeds were added to this figure, the total would rise to €116 bn (US$162 bn in 2009), or some 7.7% of GDP.

Estimates of overall crime proceeds in Italy, billion € (2009)

	Trafficking in drugs (in bn €) (Canzonetti)	Trafficking in human beings and in arms (SOS Impresa)	Other crime income (SOS Impresa) (in bn €)	Total in billion €	Total in billion US$	as a percentage of GDP
Crime proceeds	11.4	6.7	98.1	**116.2**	**162**	**7.7%**

Sources: Consicglio Italiano per le Scienze Sociali, *Il mercato illecito;* SOS Impresa, *XII Rapporto – Le mani della criminalità sulle imprese*, Rome, January 2010.

Summary of national estimates

The presentation of the national results and the discussion so far have demonstrated that the methodologies applied for generating the various national estimates, and the kind of crime categories included in the estimates, differ significantly between countries. They sometimes even differ for studies conducted in the same country. This limits direct comparability of results over time and across countries. Existing results must thus be interpreted with caution. There is a clear need for standardization and harmonization of calculations of national crime proceed estimates in order to get more reliable and comparable figures.

Nonetheless, the existing national estimates – irrespective of their shortcomings - provide an indication of the likely magnitudes involved. The calculations of the likely crime proceeds suggest that one cannot speak of crime being negligible in economic terms, accounting for just some fractions of a percentage point of GDP, just as one cannot speak of crime dominating the world economy with proportions exceeding half of GDP.[42] Instead, crime proceeds, depending on the country, are equivalent to a few percentage points of GDP (1% - 8% of GDP in the sample of available country estimates).

Combining these estimates gives an overall average of criminal proceeds (excluding tax evasion) of some 2.5% of GDP; around a quarter of this total (0.6% of GDP) comprises proceeds derived from drug trafficking. Applying this proportion to the global level – based on the worlds' total 2009 GDP - would yield an estimate of total crime related proceeds of some US$ 1.5 trillion, including some US$350 billion (range: US$270 bn – US$430 bn) derived from the sale of illicit drugs. Such results with regard to illicit drugs would have been largely in line with UNODC global illicit drug market estimates of around US$320 bn[43] in 2003.

Given the small number of country estimates, the 95% confidence interval would be rather large, ranging from 0.5% to 4.5% of GDP, equivalent to US$0.3 trillion –US$2.6 trillion in 2009. The lower end of the range, however, is unlikely to reflect reality. The range for drug sales alone is from US$270 bn - US$430 bn, and there is still much income from other crime. Using the first quartile instead, as a lower range, would give a possible range from 1.4% of GDP to 4.5% of GDP, equivalent to US$0.8-US$2.6 trillion at the global level. As will be discussed later, there are indications that the relative importance of criminal proceeds is larger in developing countries and countries in transition. Thus, the best estimate of crime proceeds of around 2.5% of GDP or US$1.5 trillion, derived from estimates of a few developed countries, is most likely an under-estimate.

[42] This was so far only true in a very limited number of countries, such as Afghanistan, where over a few years (2004-2007), the illicit opium economy exceeded half of the country's licit GDP.
[43] UNODC, *2005 World Drug Report*, Volume 1, Vienna 2005, p. 127.

Including proceeds from tax evasion, the total crime-related proceeds would rise further. Once again, given the very limited availability and comparability of national data, these estimates must be interpreted with caution and considered only as possible orders of magnitude.

Assuming - in line with the original FATF estimates - that some 70% of the overall criminal proceeds are laundered (2.5% of GDP; range: 1.4% - 4.5%), the resulting crime-related estimates of funds laundered would range from 1% to 3.2% of GDP. Extrapolated to the global level, this would be between US$0.6 and US$1.8 trillion in 2009, with a best estimate of around US$1.1 trillion or 1.8% of GDP. Thus, the best estimate from this sample for crime related proceeds would be below the lower range of the original IMF 'consensus estimate.'

Does this mean that the consensus estimate should be lowered? Probably not. There are indications that the economic importance of crime in the developed world as compared to the size of the economy is significantly less than in developing countries and countries in transition (see work of Baker (2005), Schneider (2007) and Walker (2009)). An extrapolation of crime figures to the global level based on estimates from a sample of industrialized countries is thus likely to result in an under-estimate. In fact, based on Baker's implicit 'correction factor' (1.4),[44] the global estimate of money laundered would rise to 2.5% of GDP (1.8% * 1.4), equivalent to US$1.5 trillion in 2009. Such results would then be still within the IMF's 'consensus range.'

iv) Global estimates linked to drug trafficking

According to Schneider, the FATF mentioned in a paper[45] (apparently referring to the year 1997) a global turnover figure for the sales of illegal drugs of around US$300 billion (which would be in line with UNODC estimates of the total value of drug sales), resulting in US$120 billion in profits out of which US$85 billion could have been relevant for money-laundering.

Such figures (US$120 bn) were already used almost a decade earlier, but were then referred to as 'final sales figures' of drugs in key markets (USA and Europe)[46]. In fact, the FATF

[44] Baker's estimates of cross-border flows of dirty money (2000-2005) suggested that the illicit financial flows out of developing and transition countries accounted for around half of the world total. Expressed as a percentage of GDP such illicit financial flows out of developing countries and countries in transition were equivalent to some 7.3% of GDP (2000-2005), and thus around 3 times the estimates of the illicit outflows of the industrialized countries (2.5% of GDP). The proportion of money laundered at the global level, expressed as a percentage of GDP (3.6%) was thus – according to Baker's estimates - some 40% higher than his implicit estimates for money laundered in foreign jurisdictions among industrialized countries (2.5% of GDP). This results in a 'correction factor' for industrialized countries estimates of around 1.4. (3.6% / 2.5%) which would have to be used for extrapolating industrialized countries data to the global level. (Source: Raymond W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey, 2005, p. 172).
A number of other authors also came to similar conclusions. Schneider's estimates, based on his DYMIMIC estimation methodology, seems to confirm Baker's findings. They reveal a 'correction factor' of a similar magnitude, if not higher. Schneider's global estimates of crime proceeds of US$1.7 trillion in 2006 were equivalent to 3.4% of global GDP and his estimates of crime proceeds in 20 OECD countries were again substantially lower, amounting to US$0.6 trillion or 1.8% of GDP of these 20 countries in 2006. In order for his statistics to match, Schneider's implicit estimate of the crime proceeds for developing and transition countries must have been around US$1.1 trillion, equivalent to some 6.8% of developing and transition countries' GDP in 2006, i.e. more than 3 ½ times the importance of criminal proceeds among OECD countries average (2.5% of GDP). (Sources: Friedrich Schneider, *Turnover of Organized Crime and Money Laundering: Some Preliminary Findings*, in Public Choice, Vol. 144, 2010, pp. 473-486 and Friedrich Schneider, "Money Laundering: some preliminary empirical findings", Linz, Nov. 2007, Paper presented at the Conference 'Tackling Money Laundering', University of Utrecht, Utrecht, the Netherlands, November 2–3, 2007).

[45] F. Schneider, "Money Laundering: some Preliminary Empirical Findings," presentation, October 2007.

[46] In an IMF paper from 2001, reference is made to estimates of 'final sales' figures of (some) illegal drugs in the late 1980s in the United States and Europe amounting some US$120 billion of which some 70% could be laundered, with the upper limit approaching the above quoted figure of US$85 billion: "Another approach to estimating the magnitude of financial abuse uses information about expenditures and prices involved in criminal activity that has been collected in the course of

estimated the retail drug turnover for the late 1980s at US$108 billion for the United States and US$16.3 billion for Europe; a total value of drug sales of US$124.3 billion. The largest amount was estimated for cannabis (US$74.7 billion), followed by cocaine (US$28.8 billion) and heroin (US$12 billion). The FATF estimated that out of the US$124 billion in drug sales, around US$85 billion could be available for laundering. This was equivalent to 0.7% of GDP in the USA and Europe (1988), or 0.5% of global GDP. De facto assuming that drugs were responsible for about a quarter of global money-laundering, the FATF estimated that global money-laundering in the late 1980s would have been equivalent to some 2% of global GDP.[47] As mentioned earlier, an attempt by FATF to generate new estimates a decade later failed – and no efforts appear to have been made since.

FATF estimates (late 1980s) of global amounts of laundered money

Estimate of drug sales in key markets (1988)	US$124 bn
As a percentage of global GDP (1988)	0.8%
Assumed proportion that is laundered	2/3 - 70%
Estimate of amounts laundered related to drugs	US$85 bn
Proportion in % of global GDP (1988)	0.5% of GDP
Estimated proportion of drugs in total amounts laundered	25%
Estimated total amounts laundered in 1988	US$ 340 bn
As a percentage of global GDP	2.0% of GDP
Extrapolated to global GDP in 2000	US$ 0.6 trillion
Extrapolated to global GDP in 2009	US$ 1.2 trillion

Source: Organisation for Economic Co-operation and Development, *Financial Action Task Force on Money Laundering*, Paris, 1990, p. 6. quoted in UNDCP, *Economic and Social Consequences of Drug Abuse and Illicit Trafficking*, UNDCP Technical Series No. 6, Vienna 1998, p, 26; International Monetary Fund, Financial System Abuse, *Financial Crime and Money Laundering- Background Paper*, February 2001.

UNODC undertook a study to estimate the size of the global illegal drug market in 2005. This was based on production, consumption, seizure, price and purity data, combined into a global input/output model, with some features of a gravity model. It also allowed for a number of calibrations to take expert knowledge into account (assuming that the likelihood of seizures in North America or Europe was higher than in Africa where law enforcement capabilities are more limited). The model arrived at higher figures (US$322 bn) than the old FATF estimates of the late 1980s, though the differences were not that significant once inflation and the consideration of drug markets besides the USA and Europe had been taken into account. If only the European and North American markets were considered, the inflation-adjusted FATF figures (some US$200 bn) would be quite similar to the UNODC estimates (US$ 248 bn). The 'new' estimates (US$322 bn) are also similar in magnitude to those calculated by UNDCP for the mid-1990s using a different model (US$360 billion).[48]

law enforcement (micro-data). The most publicized of such estimates have been for global money-laundering by the FATF. On the basis of information about final sales of some illegal drugs (about US$120 billion a year in the United States and Europe in the late 1980s) and extrapolating worldwide and generalizing to include all drugs, and subsequently assuming that 50-70 percent of that amount would be laundered, the FATF estimated that money-laundering could reach about 2 percent of global GDP." (International Monetary Fund, *Financial System Abuse, Financial Crime and Money Laundering - Background Paper*, February 2001.)

[47] Organisation for Economic Co-operation and Development, *FATF Working Group on Statistics and Methods - Narcotics Money Laundering, Assessment of the Problem*, 1989, Financial Action Task Force on Money Laundering, Report, February 7, 1990.

[48] UNDCP, "Economic and Social Consequences of Drug Abuse and Illicit Trafficking," *UNDCP Technical Series*, 1997 p. 51.

Size of the global illicit drug market, billion US$ (2003)

	At retail level	of which bought at wholesale level	of which bought from producers
Value of drugs sold	US$322 bn	US$94 bn	US$13 bn
In % of GDP	0.9%	0.3%	0.03%

Source: UNODC, *2005 World Drug Report*, Volume 1, Analysis, Vienna 2005, p. 127.

The UNODC study estimated the global drug market at US$ 322 billion, equivalent to 0.9% of global GDP. North America and Europe were identified as the largest drug markets, accounting for 44% and 33%, respectively, of the global market. The largest drug sales were related to cannabis, followed by cocaine and opiates. Subsequent estimates confirmed the size of the opiate market (US$65-US$70 bn), though slightly higher figures were found for the cocaine market (close to US$88 bn in 2008 and 2009), which did not signal a true increase, but a revision of coca plant yield figures in the main producer countries.

Regional breakdown of the global illicit drug market, 2003 (N = US$ 322 billion)

	North America	South America	Europe	Asia	Africa	Oceania
Value	142	9	106	35	14	16
in %	44%	3%	33%	11%	4%	5%

Source: UNODC, *2005 World Drug Report*, Volume 1, Analysis, Vienna 2005, p. 127.

Size of the global illicit drug market, by substances, billion US$ (2003)

	Opiates	Cocaine	Cannabis herb	Cannabis resin	Ampheta-mines	'Ecstasy'
Retail level	64.8	70.5	113.1	28.8	28.3	16.0
of which bought at wholesale level	20.5	18.8	29.7	10.4	6.8	7.7
of which bought from producers	1.2	0.5	8.8	0.7	0.6	1.0

Source: UNODC, *2005 World Drug Report*, Volume 1, Analysis, Vienna 2005, p. 127.

UNODC has a relatively good understanding of the size and value of the opiate and cocaine markets at the global level. Far higher levels of uncertainty exist with regard to the cannabis and synthetic drug markets. While the baseline for synthetic drugs is more difficult to establish, and the synthetic drug markets may have increased in recent years, some recent estimates of the US cannabis market suggest that the latter market could be substantially smaller than assumed in the model. Given such internal shifts in opposing directions, there are reasons to believe that the illicit drug market at the global level may still be at a similar magnitude to 2005. Updated global estimates of the illicit drugs markets using the current model - or alternative estimates from other models - falling into a range of US$200 - US$400 billion could be considered reasonable. Estimates of US$ 910 billion or more - as mentioned by some authors in the literature for 2006[49] - are, outside such a range, and clearly too high.

Updating the initial FATF model with the UNODC 2003 estimates on total drug proceeds would result in an estimate of money-laundering equivalent to 2.4% of GDP or US$1.4 trillion in 2009, that is, slightly higher than the initial FATF estimate (2% of GDP which,

[49] F. Schneider, "Money Laundering: some Preliminary Empirical Findings", presentation, October 2007.

extrapolated to 2009, would have resulted in an estimate of amounts laundered around US$1.2 trillion).

Updated FATF model of global amounts laundered

Estimate of drug sales in key markets (UNODC estimate for 2003)	US$322 bn
As a percentage of GDP	0.9% of GDP
Assumed proportion that is laundered (initial FATF estimate)	2/3 - 70%
Estimate of amounts laundered related to drugs	US$220 bn
Proportion in % of global GDP (2003)	0.6 % of GDP
Estimated proportion of drugs in total amounts laundered (initial FATF estimate)	25%
Estimated total amounts laundered in 2003	US$ 880 bn
As a percentage of GDP	2.4% of GDP
Extrapolated to global GDP in 2009	US$ 1.4 trillion

Sources: International Monetary Fund, Financial System Abuse, *Financial Crime and Money Laundering-Background Paper*, Feb. 2001 and UNODC, *2005 World Drug Report*, Volume 1, Analysis, Vienna, p. 127.

v) Private sector estimates

Given the lack of more comprehensive official estimates at the international level and the need for the financial sector to get more active in the fight against money-laundering, including in response to anti-terrorism efforts and the tightening of anti-money-laundering legislation, private consultancy firms got involved in estimating the amounts of annual money-laundering. Celent, a research and consulting firm operating in the financial services industry, estimated global money-laundering to have amounted to some US$0.9 trillion over the 2002-2005 period, that is, 2.6% of global GDP in 2002 or 2.0% of global GDP in 2005, thus reaching estimates at the low end of the IMF 'consensus range'.

According to their estimates, money-laundering is particularly widespread in the Americas (38%), followed by the Asia-Pacific region (31%) and Europe (26%). Africa and the Near and Middle East account for just 5% of the total. Money-laundering related to criminal activities was estimated at around US$ 0.2 trillion, suggesting that between a fifth and a quarter of all money-laundering was linked to proceeds of crime. Drug trafficking was identified as the single largest crime category (about a third), followed by smuggling (about a fifth). The amounts of money laundered related to terrorism were comparatively small (less than 0.3 %). The research work by Celent was not primarily aimed at providing such estimates and explaining in detail the methodology used to generate them, but towards alerting the financial sector of potential training, software and hardware requirements to cope with the requirements resulting from improved anti-money-laundering legislation.

Annual money-laundering by region, billion US$ (2000-2005)

	2000	2002	2005*
Americas	313	328	350
Asia-Pacific	246	254	292
Europe	230	234	241
Middle East / Africa	38	40	44
Total	827	856	927
in % of GDP	2.7%	2.6%	2.0%

* forecasts

Source: Celent, *Anti-Money Laundering: A Brave New World for Financial Institutions*, September 2002.

Volume of crime-related money-laundering, billion US$ (2002)

Drugs	66
Smuggling	37
Other crime	90
Terrorism	0.5
Total	193

Source: Celent, Anti-Money Laundering: A Brave New World for Financial Institutions, September 2002.

vi) NGO estimates

Estimates on illicit cross-border flows

Raymond Baker,[50] the founder of Global Financial Integrity (an NGO fighting for more transparency in international financial transactions) estimated the cross-border flows of global 'dirty money' – based on a bottom-up approach - to amount to between US$1 trillion and US$1.6 trillion annually in 2005. This included US$0.3 - US$0.5 trillion emerging from criminal activities (drugs, counterfeit goods, smuggling, racketeering et cetera), and US$0.7 - US$1 trillion arising from illegal commercial transactions, notably those violating national tax laws. This suggests that about a third of global cross-border flows of dirty money are related to funds generated from criminal activities and about two thirds from funds related to commercial activities, mostly linked to tax evasion attempts. The largest proportion of criminal activities were related to dirty money generated out of drug trafficking, followed by those related to counterfeit goods and smuggling of licit goods (such as cigarettes).

Cross-border flows of global 'dirty money,' billion US$

Dirty money	Global			
	low	in %	high	in %
Criminal				
- Drugs	120	11.0%	200	12.5%
- Counterfeit goods	80	7.5%	120	7.5%
- Counterfeit currency	3	0.2%	4	0.2%
- Human trafficking	12	1.1%	15	0.9%
- Illegal arms trade	6	2.0%	10	0.6%
- Smuggling	60	5.6%	100	6.3%
- Racketeering	50	4.7%	100	6.3%
- Subtotal crime	331	31.2%	549	34.3%
Corrupt	30	2.8%	50	5.1%
Commercial				
- Mispricing	200	18.9%	250	15.6%
- Abusive transfer pricing	300	28.3%	500	31.2%
- Fake transactions	200	18.9%	250	15.6%
- Subtotal commercial	700	66.0%	1000	62.5%
Total	**1,061**	**100.0%**	**1,599**	**100%**

Source: R. W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey, 2005, p. 172.

[50] R. W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey 2005, p. 172.

The US$1 trillion to US$1.6 trillion estimate has also been adopted by the World Bank as a best estimate.[51] The estimate apparently refers to the first few years of the new millennium. This would have been equivalent to a proportion of 2.9% to 4.3% of average global GDP over the 2000-2005 period[52] (with a midpoint estimate of 3.6% of GDP). The estimates would thus fall well within IMF's 'consensus estimate' of 2% to 5% of GDP. The criminal component of dirty money crossing the borders (US$331 to US$ 549 billion) would have been equivalent to between 0.9% and 1.5% of GDP over the 2000-2005 period (midpoint estimate: 1.2% of GDP).

Extrapolating these percentages to the year 2009 would result in estimates of overall amounts laundered of between US$1.7 and US$2.5 trillion (midpoint: US$2.1 trillion). The criminal component that was laundered would have amounted to between US$520 and US$870 billion (midpoint: US$700 bn) in 2009.

Cross-border flows of global 'dirty money' in trillion US$, shown as a percentage of average GDP over the 2000-2005 period

	2000-2005			extrapolated to 2009		
	low	high	in % of GDP 2000-2005	low	high	mid-point
Overall amounts laundered	1.1	1.6	2.9% - 4.3%	1.7	2.5	2.1
Of which: criminal component	0.3	0.5	0.9% - 1.5%	0.5	0.9	0.7

Sources: R. W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey, 2005, p. 172 and World Bank, Indicators (for GDP).

Baker also provided estimates on the amounts of illicit flows affecting developing countries and countries in transition. The cross-border transactions of 'dirty money' affecting such countries were estimated to have amounted to between US$0.5 and US$0.8 trillion over the first few years of the new millennium, that is, about half of the global total (US$1-1.6 trillion). Expressed as a proportion of average annual GDP, this would have amounted to proportions ranging from 5.9% to 8.6% of GDP over the 2000-2005 period, suggesting that developing countries and countries in transition are particularly affected by 'dirty money' flows. In comparison, the estimates of 'dirty money' flows out of the industrialized countries (US$522 – US$ 821 billion) were equivalent to 1.9%-3.0% of GDP. Thus, the midpoint estimates for developing countries and countries in transition were, at 7.3% of GDP, about three times the estimates for industrialized countries (2.5% of GDP), and twice the global average (3.6%).

[51] F. Schneider, *The Hidden Financial Flows of the Organized Crime: A Literature Review and Some Preliminary Empirical Results*, Linz, July 2010.
[52] World Bank, Indicators (GDP, current US$) http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?page=1

Cross-border flows of global 'dirty money' in billion US$, shown as a percentage of average GDP over the 2000-2005 period

	Global				of which developing and transitional economies			
	low	as a percentage of GDP	high	as a percentage of GDP	low	as a percent-age of GDP	high	as a percentage of GDP
Criminal								
- Drugs	120	0.3%	200	0.5%	60	0.7%	90	1.0%
- Counterfeit goods	80	0.2%	120	0.3%	45	0.5%	60	0.7%
- Counterfeit currency	3	0.0%	4	0.0%	1	0.0%	2	0.0%
- Human trafficking	12	0.0%	15	0.0%	10	0.1%	12	0.1%
- Illegal arms trade	6	0.0%	10	0.0%	3	0.0%	4	0.0%
- Smuggling	60	0.2%	100	0.3%	30	0.3%	40	0.4%
- Racketeering	50	0.1%	100	0.3%	20	0.2%	30	0.3%
- Subtotal crime	331	0.9%	549	1.5%	169	1.9%	238	2.6%
Corrupt	30	0.1%	50	0.1%	20	0.2%	40	0.4%
Commercial								
- Mispricing	200	0.5%	250	0.7%	100	1.1%	150	1.6%
- Abusive transfer pricing	300	0.8%	500	1.3%	100	1.1%	150	1.6%
- Fake transactions	200	0.5%	250	0.7%	150	1.6%	200	2.2%
- Subtotal commercial	700	1.9%	1000	2.7%	350	3.8%	500	5.5%
Total	1,061	2.9%	1,599	4.3%	539	5.9%	778	8.6%

Source: R. W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey, 2005, p. 172 and World Bank, Indicators (for GDP).

The estimates of the individual categories of 'dirty money' (related to criminal sources, corruption or commercial activities) were extrapolated from information provided by major businesses, government regulatory agencies and international organizations, containing a limited number of (partial) country estimates. The resulting estimates were 'conservative,' according to the author. The criminal component related to money-laundering (US$0.3 to US$0.5 trillion or 0.9% to 1.5% of average global GDP over the 2000-2005 period) was based on estimates provided by experts, politicians or institutions (for example, OECD and Interpol). These included an estimate of global organized crime 'earnings' at the turn of the new millennium of some US$1.5 trillion,[53] suggesting that between a fifth and third of such criminal earnings ended up in cross-border 'dirty money' flows.

[53]Wendy Chamberlin, deputy assistant secretary, U.S. Department of State, "Intensifying the fight against Transnational Organized Crime", remarks made at the European Union – United States Conference on Strategies to Combat Transnational Organized Crime, Ghent, Belgium, January 23, 2001.

Baker also presents a number of individual estimates in various crime categories and for various commercial activities related to the flow of money across borders (such as abuse transfer pricing and fake transactions). The methodology applied to aggregate the various individual estimates and extrapolate them to the global level is not comprehensively presented. Nonetheless, the estimates' plausibility was discussed, and it was highlighted that they were only indicative of the likely magnitudes involved.

Finally, Baker discussed the negative impact that 'dirty money' flows had on society in developing countries, as well as the lack of effective anti-money-laundering action across the world. This also applies to countries with some of the most sophisticated anti-money-laundering legislation and institutions. Given internal estimates of around US$250 billion of 'dirty money' a year entering the United States in the second half of the 1990s and captures of around US$250 million a year, Baker claims that just 0.1% of the 'dirty money' entering the United States was intercepted in the 1990s. He reports even lower proportions for other countries such as Switzerland or Germany.[54] Another expert reached similar conclusions in terms of orders of magnitude.[55]

Estimates of the proceeds generated by transnational crime

In February 2011, Global Financial Integrity (GFI) published a report on transnational crime in the developing world.[56] Analysing existing estimates of the proceeds of transnational crime in 12 key categories, which have their primary roots in developing countries, GFI arrived at a total estimate of US$650 billion of such crime proceeds per year. The largest sources were illicit drugs, accounting for 50% of the total, followed by counterfeiting (39%), human trafficking (5%) and oil (2%). The individual proportions of all other sectors amounted to 1% of the total or less.

[54] R. W. Baker, *Capitalism's Achilles Heel, Dirty Money and How to Renew the Free-Market System*, New Jersey 2005, pp. 173-174.

[55] Based on estimates of around US$300 billion of the total volume of funds laundered in the United States and total restitutions and fines of some US$665 million in 2001 (based on information from the US Sentencing Commission), just 0.4% of the total amounts laundered in the USA may have been seized and fined by the authorities – a proportion one expert classified as 'almost trivial' (Peter Reuter and Edwin M. Truman, *Chasing Dirty Money – The Fight against Money Laundering*, Washington D.C., 2004, p. 114).

[56] Global Financial Integrity, *Transnational crime in the Developing World*, February 2011.

Proceeds of transnational crime

	billion US$	in % of total	Sources
Drugs	320	50%	UNODC, World Drug Report 2005 (data refer to 2003)
Counterfeiting	250	39%	OECD, Magnitude of Counterfeiting and Piracy of Tangible Products, 2009
Human trafficking	31.6	5%	P. Belser (ILO), Forced Labor and Human Trafficking: Estimating the Profits, 2005
Oil	10.8	2%	GFI estimate based on Baker 2005 (quantities) and US Energy Information Administration (prices: 2003-2010)
Wildlife	7.8 - 10	1.4%	GFI estimate based on Francesco Colombo, "Animal Trafficking – A Cruel Billion-Dollar Business," Inter Press Service, September 6, 2003; Coalition Against Wildlife Trafficking, World Wildlife Fund
Timber	7.0	1.1%	GFI estimate for 2009 based on Seneca Creek and Wood Resources International, OECD
Fish	4.2 - 9.5	1.1%	GFI estimate for 2010, based on Norwegian national advisory group against organized IUU-fishing (FFA) and United Nations Food and Agriculture Organization
Art and cultural property	3.4 - 6.3	0.8%	GFI estimate based on Interpol, International Scientific and Professional Advisory Council of the United Nations Crime Prevention and Criminal Justice Programme
Gold	2.3	0.4%	GFI estimate based on estimates from UNODC, 2010 and other sources on illegal gold trade in DRC, South Africa and Peru
Human organs	0.6-1.2	0.1%	GFI estimate based on WHO, Council of Europe, United Nations
Small arms and light weapons	0.3-1.0	0.1%	GFI estimate based on Small Arms Survey and UNODC
Diamonds and coloured gemstones	0.9	0.1%	GFI estimate for 2009 based on UN, Kimberley Process: Rough Diamond Statistics and US Geological Survey
Total (midpoint estimates)	645	100.0%	
Total rounded	**650**		
in % of global GDP in 2009	**1.1%**		
in % of average global GDP, 2000-2009	**1.5%**		

Sources: Global Financial Integrity, *Transnational crime in the Developing World*, February 2011 and World Bank, Indicators (for current GDP).

The proceeds generated by the 12 analysed transnational crime sectors were equivalent to 1.1% of global GDP in 2009. As some of the large estimates referred to various earlier years in the new millennium, however, it may be more appropriate to express the total proceeds as a percentage of average global GDP over the 2000-2009 period. This would raise the proportion to some 1.5%.

Assuming (in line with the initial FATF estimates) that some 70% of these proceeds may eventually have been laundered, the amounts would have been equivalent to some US$450 bn or 1.1% of GDP over the 2000-2009 period, which would have been similar to Baker's initial estimates of crime-related transnational flows of US$330 to US$550 bn, equivalent to 0.9% – 1.5% of global GDP over the 2000-2005 period. Both such estimates for transnational criminal flows would fall below the IMF consensus range of 2%-5% of GDP.

It should be noted that important crime sectors at the national level (in economic terms), such as fraud, burglaries, theft, robberies, loan sharking or protection racketeering were excluded from the GFI estimates as these are still seen to be primarily linked to domestic crime activities.

There are signs, however, that this is changing. Notably, the importance of internationally operating organized crime groups involved in fraud has been growing strongly in recent years, in particular in connection with the use of information and communication technologies,[57] so that the traditional distinction between domestic and transnational crime is becoming blurred. National estimates have shown that fraud alone amounts to between 0.3% and 1.0% of GDP (average 0.5%). In some countries – from an economic perspective – fraud is even more significant than trafficking in illicit drugs.

vii) Academic estimates

Estimates of the size of the shadow/underground economy

A broad range of illegal activities is captured in the concept of an 'underground economy' (see taxonomy below):

Taxonomy of types of underground economic activities

Type of Activity	Monetary Transactions		Non Monetary Transactions	
Illegal Activities	Trade with stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling; fraud; etc.		Barter of drugs, stolen goods, smuggling etc. Produce or growing drugs for own use. Theft for own use.	
	Tax Evasion	**Tax Avoidance**	**Tax Evasion**	**Tax Avoidance**
Legal Activities	Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods	Employee discounts, fringe benefits	Barter of legal services and goods	All do-it-yourself work and neighbor help

Source: F. Schneider, *Shadow Economies of 145 Countries all over the World: Estimation Results over the Period 1999 to 2003*, based on Lippert, Owen and Michael Walker (eds.): *The Underground Economy: Global Evidences of its Size and Impact*, 1997, The Frazer Institute, Vancouver, B.C.

According to one expert, the 'underground economy' is similar to the 'shadow economy' which he defined as "market-based production of goods and services, whether legal or illegal that escapes detection in the official estimates of GDP."[58] Another key expert provided a broad definition, in line with the above-mentioned one. The shadow economy would include

[57] United Nations Economic and Social Council, Commission on Crime Prevention and Criminal Justice, Sixteenth session *Results of the second meeting of the Intergovernmental Expert Group to Prepare a Study on Fraud and the Criminal Misuse and Falsification of Identity*, Addendum, Economic fraud, E/CN.15/2007/8/Add.2, Vienna, 23-27 April 2007, p. 3.
[58] P. Smith, "Assessing the size of the underground economy: The statistics Canada perspectives", *Canadian Economic Observer*, Catalogue No.: 11-010, 3.16-33, at 3.18; Spiro, Peter S., "Evidence of a Post-GST Increase in the Underground Economy;" *Canadian Tax Journal/ Revue Fiscale Canadienne*, 1993, 41:2, pp. 247-258.

”those economic activities and the income derived from them that circumvent … government regulation, taxation or observation.”[59]

A narrower definition includes only market-based legal production of goods and services that are deliberately concealed to avoid payment of taxes, social security contributions, to avoid adhering to minimum labour market standards or to avoid complying with certain administrative procedures. Thus all income arising from traditional criminal activities such as drug dealing, burglary, robbery et cetera is excluded. The same is true for the informal household economy.

Using the DYMIMIC and the currency demand approach, Schneider developed estimates of the shadow economies, as defined above, for most countries across the world. Based on results from 145 countries, the lowest proportions of the shadow economies were in the OECD countries (on average 16.3% of GDP in 2002/2003), rising to, on average, 30.4% of GDP in Asia, 33.4% among the South-West Pacific Islands, 40.1% in the transition countries of Eastern Europe (including all the successor states of the former Soviet Union), 43.2% in Africa and 43.4% in South America, the Caribbean and Central America.[60]

The criminal part of the underground economy is substantially lower than the proportions of the shadow economies. The high proportions of the shadow economy in several parts of the world may, however, indicate a special vulnerability of these regions for potential exploitation by criminal organizations. A large shadow economy can help camouflage criminal activities as criminal organizations can make use of the ‘services’ provided by legal businesses to circumvent government rules and regulations. Thus, the outflow of dirty money from developing countries and countries in transition – expressed as a percentage of GDP – is substantially higher than the outflow of dirty money from developed countries.

Academic estimates of turnover of organized crime

A key question when analysing the extent of money-laundering is how much of the underlying turnover is realized by organized crime. One literature review shows estimates ranging from US$0.5 trillion (1996) to US$2.85 trillion (1998). More recently, the estimated proceeds of crime ranged from US$0.6 trillion (2005) to US$2.5 trillion (2005),[61] equivalent to between 1.3% and 5.5% of GDP.

Estimates generated through the DYMIMIC estimation methodology suggested that organized crime proceeds rose from US$0.8 trillion or 2.5% of GDP in 2001, to US$1.5 trillion or 3.3% of GDP in 2005 and US$ 1.7 trillion or 3.4% of GDP in 2006.[62] Assuming that this proportion remained subsequently unchanged, the turnover of organized crime could have reached some US$2 trillion in 2009.

[59] F. Schneider, *Shadow Economies of 145 Countries all over the World: Estimation Results over the Period 1999 to 2003*, based on Lippert, Owen and Michael Walker (eds.): *The Underground Economy: Global Evidences of its Size and Impact*, 1997, The Frazer Institute, Vancouver, B.C.

[60] F. Schneider, *Shadow Economies of 145 Countries all over the World: Estimation Results over the Period 1999 to 2003*, Linz 2005.

[61] F. Schneider, “Turnover of Organized Crime and Money Laundering: Some Preliminary Findings,” *Public Choice*, Vol. 144, 2010, pp. 473-486.

[62] F. Schneider, “Money Laundering: some preliminary empirical findings”, Linz, Nov. 2007. Paper presented at the conference ‘Tackling Money Laundering’, University of Utrecht, the Netherlands, November 2–3, 2007.

Partly also based on the work of Schneider, Walker and Unger (2009) suggested that "excess shadow economy may be a measure of the proceeds of organized crime…". Some interesting results can be derived by comparing Schneider's estimates of shadow economy as a proportion of GDP against GDP per capita."[63] Their analysis suggested that poorer countries have higher percentages of 'normal' shadow economy than rich countries, and there appears to be a J-curve, if put on a graph. Economic crime – including transnational organized crime - should be a subset of the shadow economy, and many of those countries to the right of the line are those reputed to have significant transnational crime, illicit drug production and corrupt business practices. If one assumes that the J-curve measures the extent of the 'normal' shadow economy, and that there is a distribution around this J-curve, then anything more than 25% above the level indicated by the J-curve could only be an indication of the activities of organised crime. On this basis, Walker derived at an estimate of around US$$1.1 trillion for the proceeds of organized crime for the year 2001, heavily concentrated in developing countries. This would have been equivalent to 3.4% of GDP in 2001.

Pooling the individual estimates of the 'proceeds of crime expressed as a percentage of GDP' would result in an average of 3.6% of GDP and a median of 3.3% of GDP. Applying such proportions to the global GDP in 2009 would give estimates of global proceeds of crime of US$2.1 trillion and US$1.9 trillion, respectively, for the mean and the median. A calculation of the inter-quartile range, which can be used to better reflect the statistical dispersion of the individual estimates around the median while eliminating the influence of (apparent) outliers, gives a likely range of criminal proceeds from 2.6% to 4.1% of GDP. This would have been equivalent to criminal proceeds ranging from US$1.5 to US$2.4 trillion in 2009. The calculation of the 95% confidence interval around the average of the various estimates would have resulted in a range of 2.7% to 4.4% of GDP, equivalent to a global total range from US$1.6 to US$2.6 trillion in 2009..

Assuming again – in line with the original FATF estimates - that some 70% would have been used for money-laundering purposes, such amounts would have been equivalent to 2.5% of GDP or US$1.5 trillion in 2009 (range: US$1.1-1.8 trillion). The estimates would fall within the IMF's original consensus range (2%-5% of GDP).

[63] J. Walker and B. Unger, Measuring Global Money Laundering: "The Walker Gravity Model", *Review of Law & Economics*, Vol. 5, Issue 2, The Berkeley Electronic Press, 2009.

Estimates of worldwide turnover of organized crime, trillion US$, as a percentage of GDP

Origin/study	Year	Volume (worldwide)	as a percentage of global GDP
M. Schuster	1994	US$ 0.5 - 0.8 trillion	0.9% - 3.0%
International Monetary Fund and Interpol	1996	US$ 0.5 trillion	1.6%
UN estimates	1994/98	US$ 0.7 - 1 trillion	2.4% – 3.4%
S. Kerry	1997	US$0.42 -1 trillion	1.4% - 3.3%
J. Walker	1998	US$ 2.85 trillion	9.5%
National Criminal Intelligence Service	1998	US$ 1.3 trillion	4.3%
	2001	US$ 1.9 trillion	5.9%
	2003	US$ 2.1 trillion	5.6%
I. Takats (2007)	2005	US$ 0.6-1.5 trillion	1.3% - 3.3%
J.D. Agarwal and A. Agarwal (2006)	2005	US$ 2.0 – 2.5 trillion	4.4% - 5.5%
Global Financial Integrity (2011) (estimate for transnational crime)	2000-2009	US$ 0.65 trillion	1.5%
J. Walker (based on J. Walker and B. Unger) (2009)	2001	US$1 trillion	3.4%
F. Schneider (University of Linz)	2001	US$ 0.8 trillion	2.5%
	2002	US$ 0.96 trillion	2.9%
	2003	US$ 1.2 trillion	3.2%
	2004	US$ 1.4 trillion	3.3%
	2005	US$ 1.5 trillion	3.3%
	2006	US$ 1.7 trillion	3.4%
Tentative estimate*	2009*	US$ 2.0 trillion	3.4%
Median of all estimates	**2009****	**US$ 1.9 trillion**	**3.3%**
Inter-quartile range of all estimates	**2009****	**US$ 1.5 – 2.4 trillion**	**2.6% - 4.1%**
Average of all estimates	**2009****	**US$ 2.1 trillion**	**3.6%**
Confidence interval of mean (95%)	**2009****	**US$ 1.6 – 2.6 trillion**	**2.7% - 4.4%**

* Tentative estimate, assuming that Schneider's proportion of turnover of organized crime expressed as a percentage of GDP remained unchanged over 2006-2009 period

** extrapolated to global GDP in 2009

Sources: UNODC calculations, based on F. Schneider, *Turnover of Organized Crime and Money Laundering: Some Preliminary Findings*, in Public Choice, Vol. 144, 2010, pp. 473-486; J. Walker, 'How Big is Global Money Laundering?' *Journal of Money Laundering Control*, 1999, Vol. 3, No. 1; I. Takats, *A theory of "crying wolf": the economics of money laundering enforcement*. Paper presented at the conference "Tackling Money Laundering", University of Utrecht, Utrecht, The Netherlands, November 2–3, 2007; J.D. Agarwal and A. Agarwal, "Globalization and international capital flows," *Finance India*, *19*, 2004, pp. 65–99; J.D. Agarwal and A. Agarwal, " Money laundering: new forms of crime, and victimization", paper presented at the National Workshop on New Forms of Crime, and Victimization, with reference to Money Laundering. University of Madras, Indian Society of Victimology, Department of Criminology, 2006; Global Financial Integrity, *Transnational Crime in the Developing World*, February 2011; J. Walker and B. Unger, "Measuring Global Money Laundering: The Walker Gravity Model," *Review of Law & Economics*, vol. 5, issue 2, the Berkeley Electronic Press; F. Schneider, "Money Laundering: some preliminary empirical findings", Linz, Nov. 2007, Paper presented at the Conference 'Tackling Money Laundering', University of Utrecht, the Netherlands, November 2–3, 2007 and World Bank, Indicators (current GDP).

Schneider undertook an in-depth analysis of the likely turnover of organized crime in 20 OECD countries using the DYMIMIC estimation methodology, which suggested that the turnover of organized crime reached US$0.6 trillion in 2006, equivalent to 1.8% of GDP of the studied countries. The data show that the turnover, expressed as a percentage of GDP, increased in the second half of the 1990s but remained stable over the 2001-2006 period. The results of the DYMIMIC estimations suggest that out of eight causal variables, five were

statistically significant, with illegal drug selling showing the highest level of statistical significance, followed by criminal activities related to illegal weapon sales and the illegal trade in human beings.[64]

The results for twenty OECD countries (1.8% of GDP) were similar in magnitude, though smaller, than the average found in the six OECD countries for which country estimates were available (2.6% of GDP). If a five-country average (USA, UK, Australia, Netherlands and Germany) were calculated, the proportion of crime proceeds would fall to between 1.6% (unweighted average) and 2.0% of GDP (weighted average) - and thus come close to the estimate for 20 OECD countries.

Estimates of the turnover of organized crime in 20 OECD countries (1994-2006)

Year	bn US$	in % of GDP
1995	270	1.2%
1996	296	1.3%
1997	320	1.4%
1998	334	1.5%
1999	362	1.5%
2000	389	1.6%
2001	420	1.8%
2002	441	1.8%
2003	479	1.7%
2004	515	1.7%
2005	573	1.8%
2006	614	1.8%

Source: F. Schneider, "Turnover of Organized Crime and Money Laundering: Some Preliminary Findings," *Public Choice*, Vol. 144, 2010, pp. 473-486.

Schneider's estimates (like those of Baker and Walker) also suggest that the significance of organized crime in the OECD countries is far lower – in both absolute and relative numbers - than in the rest of the world. According to these estimates, 35% of the global turnover of organized crime in 2006 was generated in 20 OECD countries (US$0.6 trillion) while the bulk (65% or US$1.1 trillion) occurred in the rest of the world, i.e. mostly in developing countries and countries in transition. The OECD estimates also turned out to be in relative terms far smaller than previous estimates for organized crime at the global level by the same expert (3.4% of GDP in 2006). This would suggest that developing countries and countries in transition were faced with, on average, crime proceeds equivalent to 6.8% of GDP. This would be more than three times the average proportion found in the industrialized countries - though less than the estimate reported from Italy (7.7% of GDP).[65] Would such results be plausible? At least for some developing countries, organized crime proceeds certainly amounted to more than 6.8% of GDP. The UNODC *Afghanistan Opium Survey 2006*, for instance, found that the proceeds from opiate exports to neighbouring countries amounted to a sum equivalent to 46% of Afghanistan's GDP.[66] No other proceeds from crime were included

[64] F. Schneider, *Turnover of Organized Crime and Money Laundering: Some Preliminary Findings*, JEL-Code: K42, H26, O17, H26, http://www.econ.jku.at/members/Schneider/files/publications/OrgCrime_Feld4.pdf
[65] See discussion of Italy under the subchapter 'National Estimates.'
[66] UNODC, *Afghanistan Opium Survey 2006*, Vienna 2006, p. 131

in this figure, which means that it can be assumed that the total Afghan crime proceeds in 2006 would have been higher.

Estimates of the proportion of crime proceeds that are laundered

What proportion of crime proceeds are laundered? A review of existing literature does not show much empirical evidence in this area. Instead, it reveals the various authors' assumptions.

For the drug area, the FATF assumed for the late 1980s that out of US$124 bn of drug sales in North America and Western Europe, some US$85 bn (68.5%) would have been available for money-laundering purposes. Taking rounding of figures into account, the FATF de facto estimated that between two thirds and 70% of the total profits were being laundered.[67]

Similarly, Unger - putting together the results of various studies conducted in the Netherlands in midst of the first decade of the new millennium - arrived at estimates of the proportions that were laundered ranging from 71% to 75% of total crime proceeds. The estimate included drug sales, for which it was assumed that some 80% of profits were available for laundering, and a number of domestic crime activities, such as burglaries or thefts, for which the assumed proportions for money-laundering are apparently small.[68]

Walker in his initial model on estimated proceeds of crime and money-laundering in Australia (1994) arrived at proportions of money laundered as a percentage of total crime proceeds from 5% to 76% with money-laundering related to drugs ranging from 20% to 90%. His best estimates for drugs ranged from 50% to 70%, yielding a midpoint estimate for drugs of 60%. An update of the Australian crime situation for the year 1998 again showed proportions used for money laundering ranging from 25% to 88% with an average (based on midpoint estimates of proceeds of crime and money laundered) of 47%. The extent of money laundering related to drugs was raised to 80%.[69]

In a separate analysis of the estimated proceeds of crime and the extent the money is being laundered, based on an expert survey Walker conducted in Australia, the perceived proportion of laundered money in Australia was substantially higher, ranging from 57% to 73% (mid-point: 65%). The proportion estimated by experts for illicit drugs reached 83%.[70]

For the US drug trade, notably cocaine, such proportions do not seem to hold true, however. This is due to large-scale cash smuggling from the USA into Mexico in return for drugs smuggled to the USA via Mexico. According to estimates collected for a study on US-Mexico Security Cooperation (2010), the Mexican Government estimated drug-related cash flows

[67] Organisation for Economic Co-operation and Development, *Financial Action Task Force on Money Laundering*, Paris, 1990, p. 6. quoted in UNDCP, *Economic and Social Consequences of Drug Abuse and Illicit Trafficking*, UNDCP Technical Series No. 6, Vienna 1998, p, 26 and International Monetary Fund, *Financial System Abuse, Financial Crime and Money Laundering- Background Paper*, February 12, 2001.

[68] M. Smekens and M. Verbruggen, *De Illegale Economie in Nederland*, Centraal Bureau voor de Statistiek, September 2004; W. van der Heide and A.Th.J. Eggen, *Criminaliteit en rechtshandhaving 2001*, WODC: 211 Onderzoek en Beleid. Centraal Bureau voor de Statistiek, Meppel: BOOM Juridische Uitgevers, Den Haag: WODC quoted in Brigitte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 66.

[69] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 62.

[70] J. Walker, 2005, quoted in J. Walker and B. Unger, "Measuring Global Money Laundering: The Walker Gravity Model," *Review of Law and Economics*, Vol 5, 2009, p. 840.

from the USA to Mexico at some US$11 bn per year.[71] An analysis of US banknotes, repatriated from Mexico, revealed that at least US$17 bn per year must have been smuggled from the USA to Mexico in 2003 and 2004.[72] An estimate by a financial services firm (KPMG) suggested cash smuggling from the USA to Mexico at around US$25 bn per year. Academic estimates ranged from US$6 to US$36 billion.[73] Against this background of large-scale cash smuggling, potentially fuelling the illicit drug trade, the Mexican Government introduced stricter regulations in June 2010, imposing limits on US dollar currency conversions in Mexico and announcing plans to limit the use of cash for the purchase of real estate and luxury items.[74] Estimates on cash smuggling by both Mexican and Colombian organized crime groups are even higher, ranging from US$18 bn to US$39 bn per year,[75] with a midpoint estimate of US$29 bn. Applying such figures to US drug sales estimates (US$64 bn in 2000)[76] suggest that some 45% of the total receipts may be smuggled abroad in cash This means that the amounts available for money-laundering in the USA would be – probably – around 55% (range: 39%-72%) of drug-related proceeds.

Pooling these estimates suggests that around 70% crime proceeds may be laundered (range: 40%- 80%). For drugs, the likely proportions are from 60% to 80%. These results are based on a very small and biased sample, which means that the actual averages may differ substantially. Far more research, from a larger number of countries across the globe, would be needed to generate more reliable estimates on the extent of money-laundering from criminal proceeds globally.

[71] The Mexican Government figure was given in interviews with senior members of the Mexican Financial Intelligence Unit. Attorney General Eduardo Medina Mora, appearing before the Mexican Congress in October 2007, stated that Mexican banks receive about $1 billion from their US counterparts annually, but return up to $16 billion, of which about $10 billion "does not have an explanation … and could be attributed to the flow of drug trafficking money." (Source: D. Farah, *Money Laundering and Bulk Cash Smuggling: Challenges for the Mérida Initiative*, Working Paper Series on U.S.-Mexico Security Cooperation, Trans-Border Institute, University of San Diego, May 2010, p. 4.)

[72] The US$17 billion estimate is based on a review of US banknotes repatriated from Mexico. The estimate represents only US currency returned to the United States, not all US currency that was smuggled to or through Mexico. This estimate is based on analysis of US banknotes purchased by US financial institutions from Mexican financial institutions from 2003 through 2004. (Source: National Drug Intelligence Center, *National Drug Threat Assessment 2010*, February 2010.).

[73] R. Sierra, *Evolución y Situación Actual de la Prevención de Lavado de Dinero en el Sistema Financiera Mexicano*, KPMG, April 2006. The lower figure comes from interviews and writings by Ricardo Gluyas Millán, in particular, "Ganancia Ilícita: Prevención Contra el Lavado de Dinero, México, 2005," p. 233. The upper-end figure was provided by numerous academic sources in interviews. According to Samuel Gonzalez of the Mexican Autonomous Institute of Technology, drug proceeds laundered in Mexico account for as much as four percent of the country's GDP, or roughly US$35.7 billion annually. ("Marching as to War," economist.com, January 31, 2008.) All sources quoted in D. Farah, *Money Laundering and Bulk Cash Smuggling: Challenges for the Mérida Initiative*, Working Paper Series on U.S.-Mexico Security Cooperation, Woodrow Wilson Center for International Scholars/Trans-Border Institute, University of San Diego, May 2010, p. 4.

[74] The regulations apply to cash for cash transactions from dollars to pesos as well as to deposits, credit payments and service fees. The Government of Mexico also announced new reforms, including greater interagency coordination to identify and investigate suspicious transactions, harsher penalties for using resources from illicit activities, and restrictions on the use of large amounts of cash. This would prohibit cash purchases of real estate and cash payments in excess of 100,000 pesos ($7,700) for luxury items. (Source: US Department of State, *2011 International Narcotics Control Strategy Report*, Washington D.C., March 2011.

[75] National Drug Intelligence Centre, *National Drug Threat Assessment 2009*, (Illicit Finance – Bulk Cash Smuggling), *Washington D.C.*, December 2008.

[76] ONDCP, *What America's Drug Users spend on Illicit Drugs*, 1988-2000, Washington 2001.

Proportion of crime proceeds available for laundering, in percent

	Crime			Of which drugs		
	midpoint / best estimate	from	to	midpoint / best estimate	from	To
FATF (1988)				69%	66%	70%
Australia, 1994		5%	76%	60%	50%	70%
Australia, 1998		25%	88%	80%	80%	80%
Australia (based on expert survey)	65%	57%	73%	83%	83%	83%
Netherlands 2004	73%	71%	75%	80%	80%	80%
USA, 2009				55%	39%	72%
Unweighted	69%	40%	78%	71%	66%	76%
Average rounded	70%	40%	80%	70%	60%	80%

Sources: International Monetary Fund, *Financial System Abuse, Financial Crime and Money Laundering-Background Paper*, February 12, 2001; J. Walker, "Estimates of the Extent of Money Laundering in and through Australia," paper prepared for Australian Transaction Reports and Analysis Centre, John Walker Consulting Services, Queanbeyan, Australia, September 1995; J. Walker quoted in J. Walker and B. Unger, "Measuring Global Money Laundering: The Walker Gravity Model", *Review of Law and Economics*, Vol 5, 2009, p. 840; B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 62; D. Farah, *Money Laundering and Bulk Cash Smuggling: Challenges for the Mérida Initiative*, Working Paper Series on U.S.-Mexico Security Cooperation, Woodrow Wilson Center for International Scholars/Trans-Border Institute, University of San Diego, May 2010, p. 4; ONDCP, *What America's Drug Users spend on Illicit Drugs*, 1988-2000, Washington 2001 and National Drug Intelligence Centre, *National Drug Threat Assessment 2009*, (Illicit Finance – Bulk Cash Smuggling), *Washington D.C.*, December 2008.

Summary of estimates of crime proceeds and money laundered

Combining the results of the various groups of estimates (based on country estimates, global 'scientific' estimates, et cetera) shows a surprising convergence, irrespective of the divergence within each group. The overall best estimates of criminal proceeds seem to fluctuate around 3.6% of GDP or US$2.1 trillion in 2009. The best estimates of the amounts laundered fluctuate around 2.7% of GDP or US$1.6 trillion in 2009.

The best estimates and the average range of the estimates for the amounts available for laundering (2.1% - 4.0% of GDP) fall well within the IMF's original 'consensus range' of 2%-5% of GDP, though data also suggest that the best estimates (around 2.7% of GDP) are situated towards the lower end of the range.

Once tax- and customs-related money-laundering activities were included, results would move towards the upper end of the IMF 'consensus range,' or – depending on the extrapolation models applied - slightly beyond. On the other hand, if only international crime related proceeds were considered, available estimates suggest that the amounts available for laundering would fall to levels around 1% of GDP, below the original IMF consensus range.

Summary of estimates of criminal proceeds and amounts laundered at the global level

	Reference year / period	Criminal proceeds			Amounts laundered		
		best estimate	from	to	best estimate	from	to
a/ Original FATF estimate	1988				2.0%		
b/ FATF estimate updated with UNODC drug data	2003				2.4%		
c/ Six industrialized countries	1990-2009	2.5%	1.4%	4.6%			
d/ Six industrialized countries extrapolated to global level	1990-2009	3.5%	2.0%	6.4%	2.5%*	1.4*	4.5*
e/Consulting firm	2002				2.5%		
f/ NGO (Baker)**	2000-2005				3.6%	2.9%	4.3%
g/ Scientific estimates (based on studies by 10 authors)	1994-2009	3.6%	2.7%	4.4%	2.5%*	1.9*	3.1*
Average (b,d,f,g) as a percentage of GDP		**3.6%**	**2.3 %**	**5.5 %**	**2.7%**	**2.1 %**	**4.0 %**
Extrapolated to 2009 in trillion US$	**2009**	**2.1**	**1.4**	**3.2**	**1.6**	**1.2**	**2.3**
Memo: IMF 'consensus range'	*1998*				*3.5%*	*2.0%*	*5.0%*

** assuming – in line with original FATF estimates – that some 70% of crime proceeds are available for laundering*
** including components such as mispricing, abuse transfer pricing and fake invoices which are – *inter alia* - used for tax or customs avoidance.

Estimates of money laundered by destination

Based on an IMF estimate of US$1.5 trillion for the year 2005 (which would have been within the range of US$1 to US$1.6 trillion estimated by Baker, and well within the US$1.2-2.3 bn estimate for 2009, shown above), Unger[77] provided an overview of the likely destinations of amounts laundered for the 1997-2000 period. The results suggested that two thirds of money laundered worldwide is transferred to some 20 countries. Most of these countries are developed, with sizeable legal economies. The study found a limited number of microstate offshore countries (OFCS) and tax havens among the top-20 investment locations. If these 20 countries are categorized by region, the model suggests that 31% of global money-laundering takes place in the Americas, 31% in Europe and 5% in Asia.

viii) Estimates of wealth distribution and importance of offshore centres

In order to better understand the relative importance of illicit cross-border money flows, an overview of the global distribution of wealth (in the form of financial assets) may be useful.

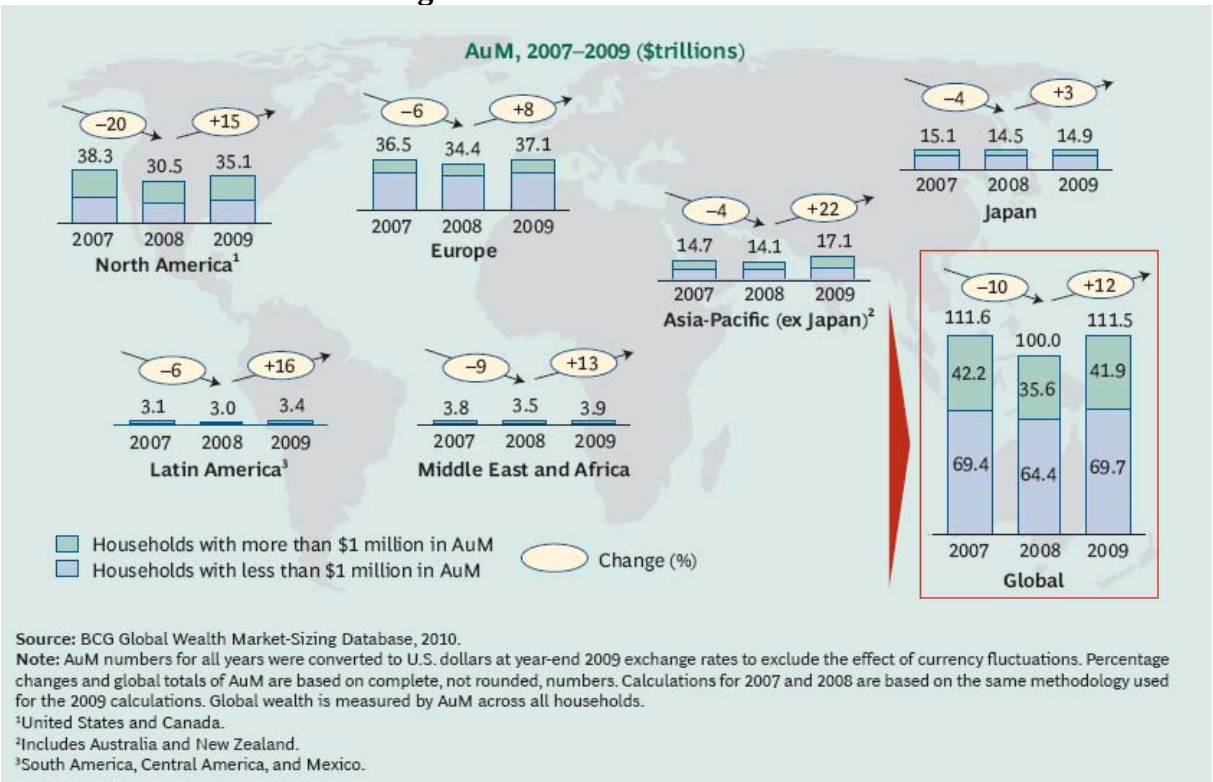
According to estimates by the Boston Consulting Group, an internationally operating management consulting firm, 'global wealth' - defined as 'assets under management' by 'wealth management institutions' (such as banks and other financial services providers) - amounted to US$111.5 trillion in 2009, up from US$94.7 trillion in 2005. If US$1.5 trillion

[77] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 80.

had been laundered in 2005 (the above-mentioned IMF estimate), this would have been equivalent to 1.6% of such global assets.

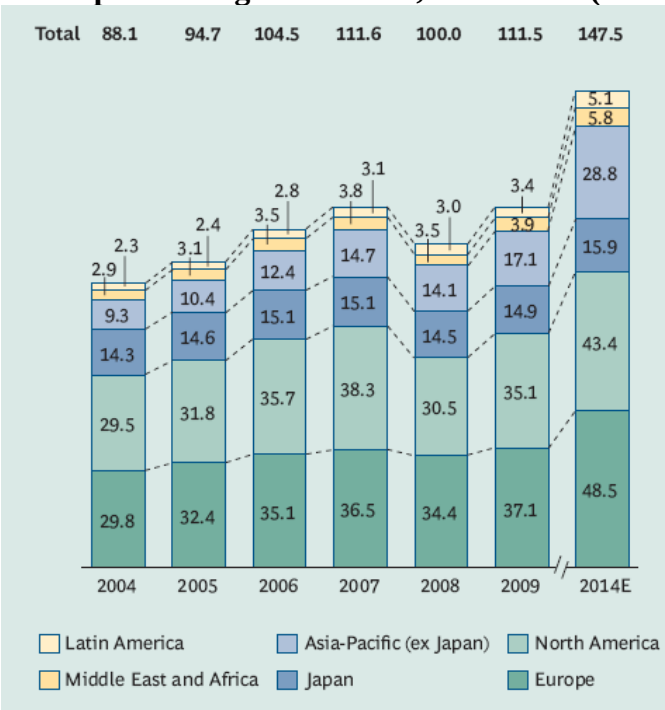
The global financial assets are primarily found in Europe (33% of the world total), the USA and Canada (31%), and the Asia/Pacific region (29%). Overall wealth in the Middle East and Africa (3.5% of the world total) and Latin America (3.0%) is comparatively low.

Estimates and distribution of 'global wealth'



Source: The Boston Consulting Group, *Global Wealth 2010, Regaining Lost Ground*, June 2010.

Development of 'global wealth,' 2004-2009 (and estimates for 2014)

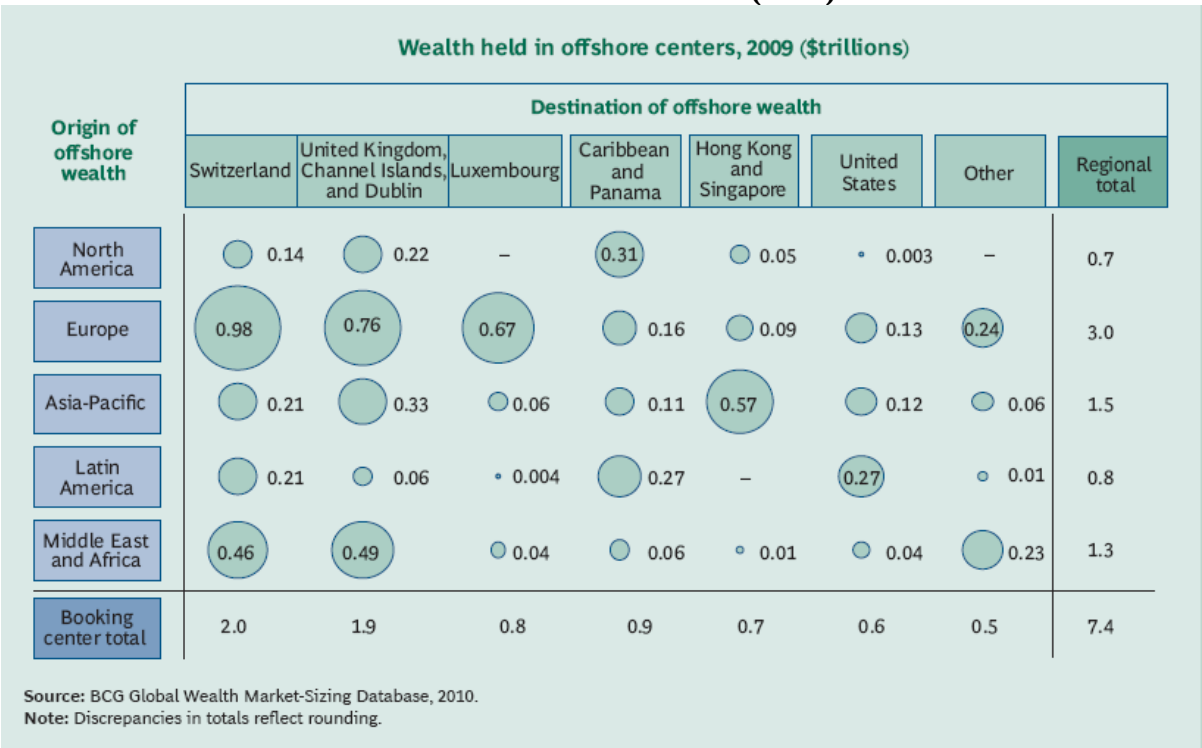


Source: The Boston Consulting Group, *Global Wealth 2010, Regaining Lost Ground*, June 2010.

Assets held in offshore centres, defined as assets booked in a country where the investor has no legal residence of tax domicile, amounted to US$7.4 trillion in 2009, equivalent to 6.6% of globally held assets. The Boston Consulting Group identified Switzerland as the single largest offshore centre, with non-resident assets of US$2 trillion held there in 2009, equivalent to 27% of all offshore assets or 1.8% of global assets. The next largest offshore centres were the British Isles, including the United Kingdom, the Channel Islands and Ireland (US$1.9 trillion or 26% of all offshore assets), the Caribbean and Panama (US$0.9 trillion or 12%), Luxembourg (US$0.8 trillion or 11%), Hong Kong SAR of China and Singapore (US$0.7 trillion or 9%) and the United States (US$0.6 trillion or 8%). Other offshore centres account for US$0.5 trillion or 7% of total offshore assets.

The breakdown also suggests that investors tend to prefer offshore centres that are geographically close. European investors choose primarily (80%) offshore centres in Europe (Switzerland, British Isles and Luxembourg). Most North American investors also prefer close offshore centres (Caribbean and Panama: 44% of the total). Similarly, Latin American investors prefer offshore centres in the Caribbean, Panama (33%) and the USA (34%), whereas Asian investors trust primarily offshore centres in Hong Kong, China and Singapore (38%). The closest offshore centres for investors in the Middle East and Africa are those located in Europe. These investors choose primarily to invest in offshore centres in the UK and the Channel Islands (38%) and Switzerland (35%).

Breakdown of financial assets held in offshore centres (2009)



Source: The Boston Consulting Group, *Global Wealth 2010, Regaining Lost Ground*, June 2010.

The data also indicate the sources of the assets invested in offshore centres. Most of the money is sourced from Europe (US$3 trillion or 41% of all assets invested offshore), followed by the Asia-Pacific region (US$1.5 trillion or 20%) and the Middle East and Africa (US$1.3 trillion or 18%). Investors from North America account for just 9% of global offshore investment.

Breakdown of global (financial) assets in 2009

	Total assets (in trillion US$	Offshore (countries of origin) (in trillion US$)	Expressed as a percentage of total assets
North America*	35.1	0.7	2.0%
Europe	37.1	3.0	8.1%
Asia-Pacific	32	1.5	4.7%
Latin America	3.4	0.8	23.5%
Middle East / Africa	3.9	1.3	33.3%
Total	111.5	7.4	6.6%

* United States and Canada

Source: The Boston Consulting Group, *Global Wealth 2010, Regaining Lost Ground*, June 2010.

Expressed as a percentage of global wealth held in different regions, the data suggest that the popularity of investing in offshore centres differs substantially across regions. The highest 'proportions' of offshore investment are found from clients in the Middle East and Africa. Their offshore investment is equivalent to one third of financial assets in their own countries. In Latin America, the proportion is nearly one quarter. In the rest of the world, the proportion of offshore investment is well below 10%, falling to just 2% for the USA and Canada.

2) Analysis of selected transnational organized crime sectors *(under development)*

The previous chapter contained an overview of methodologies used and of results obtained by various authors on the extent of the criminal proceeds and the amounts that are assumed to be laundered at the global level. This chapter will analyse a number of transnational organized crime sectors.

There exist many definitions of organized crime at the national level.[78] Though the concept of 'organized crime' is widely used by criminologists, law enforcement agencies, the justice system and journalists in many countries, the definition of 'organized crime' at the international level has been rather vague. What has been defined in the United Nations Convention against Transnational Organized Crime (TOC) have been some of the main constituent components of what can be considered *transnational organized crime*. These components include:

- a *serious offence* [notably a serious crime] ,
- the *transnational* nature of such an offense,
- an *organized criminal group*.

Article 3 stipulates that the offence has to be *transnational* in nature, involve an *organized criminal group* and the offence must be serious, that is, either a *serious crime* (as defined below), related to the participation of a person in an *organized criminal group*, involve *the laundering of proceeds of crime* or concern *corruption* of a public official geared towards the obstruction of justice.

An *organized criminal group* is defined in Article 2 of the TOC as '*a structured group of <u>three or more persons</u>, existing <u>for a period of time</u> and acting in concert <u>with the aim of committing one or more serious crimes</u> or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a <u>financial or other material benefit</u>*. In other words, the number of persons needed to participate in an organized crime group is limited. The group must, however, exist for a period of time and be 'structured. A 'structured group' is defined as *a group that is not randomly formed for the immediate* commi*ssion of an offence.* A terrorist or insurgent group, committing crimes while fighting for some political objective, would not fall under the definition of the TOC convention, unless it is also interested in the material gains resulting from its activities.

The term *serious crime* (Art. 2) has been defined in the Convention as *constituting an offence punishable by a maximum deprivation of liberty of at least four years or a more serious penalty.* This requirement (four years or more potential prison sentence) is less restrictive than the 'serious crime' requirement under the FATF recommendations.

The next criterion is the *transnational* nature of an offence. According to Article 3, para 2, an offence is *transnational in nature* if:
(a) *It is committed in more than one State;*
(b) It is committed in one State but a substantial part of its preparation, planning, direction or control takes place in another State;

[78] In the USA, for instance, the Organized Crime control Act of 1970 defines organized crime as "the unlawful activities of a highly organized, disciplined association".

(c) It is committed in one State but involves an organized criminal group that engages in criminal activities in more than one State; or
(d) It is committed in one State but has substantial effects in another State.

The study does not attempt to map the financial dimensions of all existing transnational organized crime activities. Instead, it focuses on a series of prominent cases of transnational crimes, committed by organized crime groups.

The most challenging task in this context is to arrive at monetary estimates of these flows in the various subregions. The next question relates to the extent that such flows are used to maintain the illegal business activities, for the personal consumption of traffickers, and to what extent such funds actually enter the financial system. The final questions are how much of these flows into the financial system remain within the country concerned, and how much is directed to other destinations, including offshore centres. A special model is being created to help answer these questions.

a) Methodology

The discussions on the methodology in the previous chapter have shown that a significant number of proposals exists to address the problem of estimating the extent of money-laundering. But there is no single method that can be regarded as the 'gold standard' for undertaking such a study. Though promising, most of the methods discussed suffer from a number of drawbacks. Some of them rely on case studies, which raises questions as to the statistical representativeness of the results. Others are based on interviews to gather expert opinion. In this case, there is a potential problem of a perception bias. Some models rely heavily on financial transactions data, including suspicious activity reports. In such models, there is no direct nexus between the proceeds of crime and the amounts of money being laundered, and the same money may be counted multiple times as the funds are moved from country to country for laundering. There are also a number of problems if the analysis is based on statistical discrepancies in balance of payment and trade statistics, or if it is based on currency demand.

Against this background, a new method is being developed and tested for this study, which is more directly linked to criminal activities and the resulting financial flows.

The method consists of the following four sub-components:

1. Identifying transnational organized crime activities that pose a serious threat to society at the global level in terms of health, security, corruption and financial dimensions;
2. Calculating the financial gains arising from these transnational crime activities at the various subregional levels;
3. Estimating the amounts - arising from these transnational crime activities in the various subregions - that enter the financial system;
4. Estimating the amounts that cross borders for money-laundering purposes, reflecting the actual 'transnational illicit financial flows' from the proceeds of transnational crime.

UNODC has started work on the identification of key transnational organized crime activities, summarized in *The Globalization of Crime – a Transnational Organized Crime Threat*

Assessment (June 2010). The findings of this report are supplemented with other UNODC research as well as through a more intensive literature review. The above-mentioned study also presented preliminary estimates of the amounts involved for some key trafficking flows. For the purposes of this study, the relevant estimates are being reviewed and updated (if necessary).

Three major challenges face this exercise. The first is that statistically-based estimates of the proceeds of crime are almost non-existent in most countries. This does not mean that it cannot be done. Recent work by the International Monetary Fund to estimate the proceeds of crime in Germany (as discussed in the previous sub-chapter under 'national estimates') provides a useful model for work that should be done in other countries as well. Analysis of this kind, however, has been conducted in few countries, and most – if not all - of these have been developed countries. Law enforcement necessarily focuses on the most visible part of the organized crime spectrum and rarely catches a glimpse of the whole picture. Occasional proceeds of crime data are produced when organized crime suspects are convicted, but few countries have conducted any comprehensive analysis of the overall proceeds of crime. Moreover, some of these assessments are dated, going back some 20 years (USA).

This study is therefore limited to those offence types for which a body of proceeds of crime data exists, and methods of estimation are developed to fill in the gaps in the data. Even within these limitations, major difficulties are encountered. In relation to the types of transnational organized crime covered in this study, there is some knowledge about the extent of crime, and the profits earned by crime, in the countries of origin and the countries of destination. However, transnational organized crime also generates proceeds in transit countries, and often, much less is known about these activities. As is the case with illicit drugs, where the trade involves a global distribution network, there are countries of production, wholesalers in a range of other intermediate or transit countries, and retailers in countries of consumption. Similar trading structures can be identified in relation to other crime types. Where numbers of producers, wholesalers and retailers can be estimated, and sales volumes and unit prices are known, estimates can be made of the average per capita income of these groups in the network. Thence, an estimate can be made of the excess of income over a measure of living costs, and this can be used as an estimate of the amount of 'launderable' income. (The study – when it comes to drugs - will also experiment with some more sophisticated approaches). The area where available information is weakest is in the countries of transit, yet significant profits – notably if compared to the size of the economies concerned - may still be generated there as the 'middlemen' take their share of the proceeds in return for services rendered.

A second major challenge is to develop estimates of the extent to which proceeds from crime enter the financial system. For this purpose, a literature review has been undertaken to obtain some baseline data. Moreover, a number of techniques have been developed and used to arrive at such estimates. They include - in the drug area - an analysis of individual drug seizure cases reported to UNODC by Member States. This has been done to identify reasonable cut-off rates for the amounts that are spent by small-scale drug traffickers to cover their current living costs versus surpluses generated by larger dealers that would be available for money-laundering purposes. In addition, indictments and court files, where available, have been reviewed to identify typical patterns. The study also tries to obtain and analyse expert opinions on this topic from Financial Intelligence Units (FIUs) and other relevant institutions at the national and international level, as well as from experts working in academia. This is done, inter alia, via a Reference Group of experts from various regions.

Another major challenge is the identification of the proportion of illegal funds that enter the financial system and are subsequently laundered by leaving the respective jurisdiction. In order to tackle this problem, another literature review has been undertaken, and expert opinions on this topic from FIUs and other relevant institutions analysed.

A business is typically formed to earn profit that will increase the wealth of its owners and grow the business itself. The owners and operators of a business have as one of their main objectives *the receipt or generation of a financial return* in exchange for work and acceptance of risk.

Transnational organized crimes are generally conducted as businesses in one of four main categories:

- Businesses whose profitability depends on their satisfying some demand for prohibited goods/services
    - for example, illicit drugs, firearms, forced labour, body parts and endangered species;
- Businesses involving satisfying a demand for legal goods/services, but avoiding tax, excise duties or regulations
    - for example, cigarettes, alcohol, prostitution and illegal immigration;
- Businesses involving satisfying a demand for legal goods/services, but through undercover production or theft of resources
    - for example, stolen vehicles, illegally copied DVDs, cultural treasures, illegal logging or extractive industries such as oil or diamonds;
- Businesses involving the predatory diversion of government or private funds or business profits through fraud or corruption.
    - for example, false invoicing, political and financial manipulation of funds, internet and ID frauds, stock market manipulation and fraud.

Transnational organized crime groups conduct this business because of the significant profit that can be earned. Business is conducted in places where profit is maximised, and may involve various stages, such as production, wholesaling and retailing (as in the illicit drugs trades) which may each involve transnational movements and different degrees of profitability. Profits may be generated in terms of cash, other financial assets, or in commodities (for example, diamonds and timber) that can be resold.

Since all of these characteristics of transnational organized crime are also features of normal business and international trade - other than their criminality - the approach used is inspired by that area of economics. A ‘gravity model’ of the proceeds of crime and money-laundering is being developed. When provided with estimates of the proceeds of crime and the extent to which these proceeds of crime are likely to be laundered, the purpose of the model is to estimate the likely extent and direction of the resulting flows for the first stage of laundering.[79]

This project would, ideally, commence with a compilation of data on the proceeds of crime, for each type of organized crime, proceed to estimates of the proportion of illegal funds that enters the financial system, as opposed to simply being spent on personal consumption or business costs, and finally, to estimates of the amounts that subsequently leave the jurisdiction in which they were generated.

[79] Note that no attempt is made to analyse subsequent stages of money laundering.

b) The case of cocaine: estimating the proceeds of the illicit cocaine trade (preliminary results)

UNODC has undertaken several rounds of estimates of the various illicit drug markets, notably for cocaine and the opiates. With regard to cocaine, UNODC's latest estimates suggest a total retail sales figure of around US$88 bn (range: US$80-US$100 bn) for 2009. Estimates of the opiates market are slightly lower, at around US$68 bn.

UNODC has compiled a comprehensive database with annual time-series data covering almost all countries, a range of key drug types, and an extensive list of data items. From these data, estimates can be derived of the extent of cocaine market-related activities affecting various countries, and the profits generated by those activities. The data include:

- Estimated numbers of producers
- Estimated area under cultivation
- Estimated quantity of production
- Estimated quality of production and of the amounts trafficked ('purity')
- Estimated "farmgate" prices to producers
- Estimated losses in transit to consumers (seizures)
- Trafficking routes
- Estimated wholesale prices (price per kilogram)
- Estimated retail prices (price per gram)
- Estimated numbers of consumers
- Socio-demographic profiles of consumers
- Estimated consumption per consumer (for a limited number of countries)
- Numbers of traffickers / consumers arrested

These data provide sufficient information to estimate the supply, demand, price levels, and therefore, potential profits made.[80]

Supply of illicit drugs proceeds in stages, with wholesalers importing drugs in bulk, selling in smaller quantities to their network of retailers for on-sale, in even smaller quantities, to consumers. When crime generates proceeds in small amounts, the offender will spend a significant proportion of this income on living costs and minor luxuries, leaving only a small proportion available for laundering. By contrast, offenders whose proceeds of crime are accrued in large amounts are likely to launder a greater proportion of their income.[81] It follows, therefore, that there may be differences between wholesalers of illicit goods and services and retailers of the same goods and services, in their propensities to launder money, since wholesalers typically deal in bulk and retailers in much smaller quantities. The present modelling of the illicit drug trades follows this logic, and separately estimates the profits made by wholesalers and retailers in each country.

The calculation process – using the example of cocaine - will be explained here in more detail. The calculation starts with estimates on the number of users in each country. This information is typically obtained from household surveys. The proportion of people who have

[80] See, for example, UNODC, *World Drug Report 2005*, Vol. 1, Ch. 2., Estimating the Value of Illicit Drug Markets, Vienna 2005.

[81] J. Walker, *Estimates of the Extent of Money Laundering in and through Australia*, Australian Transaction Reports & Analysis Centre, Canberra 1995 and J. Walker, J. and J. Stamp, *The Extent of Money Laundering in and through Australia in 2004*, Australian Institute of Criminology, Canberra 2007.

used cocaine at least once over the last 12 months are identified via such surveys. Having signed and ratified the 1961 Single Convention, the national authorities of each country are required to provide UNODC with their best national estimates. Nonetheless, information provided by Member States is uneven. Good information is available from countries in North America, Europe, Oceania and South America (including Central America and the Caribbean). On the other hand, information is poor for the majority of countries in Asia, and – in particular – Africa.

The population of a country aged 15-64 is multiplied with the prevalence rate to give an estimate of the total number of cocaine users in the country. In case the surveys were conducted for different age groups, the results have been adjusted accordingly, typically assuming that there are hardly any cocaine users above the age of 65. In case the surveys used other measures (lifetime prevalence, past month prevalence), countries in the region having measured annual prevalence and lifetime or past month prevalence were used to reach – via a regression analysis – an estimate of the likely annual prevalence rate of the country concerned. Some countries only conducted school surveys, and regression analyses were undertaken to arrive at a prevalence estimate based on information of countries that had conducted a school survey and a national household survey. Another question is how to handle old information. For the purposes of this exercise, all estimates were kept. The prevalence rates obtained from surveys in previous years were applied to the current population aged 15-64. A greater challenge is to deal with missing information. In these cases, the subregional average was taken as a proxy and adjusted if other information (including qualitative information) was available that cocaine use is likely higher or lower than the sub-regional average.

The result of this complex exercise was an estimate of around 15.6 million cocaine users in 2009 or 0.35% of the population aged 15-64, which is in line with results obtained for the previous year (15.9 million in 2008). The model suggests that the largest numbers of cocaine users are found in North America (5.7 million), West and Central Europe (4.2 million) and South America (2.7 million, including the Caribbean and Central America). Estimates for Asia are low (US$0.7 million). The best estimates for Africa give a figure of 1.6 million people – but this estimate should only be considered as indicative, as most African countries have not conducted national household surveys.

Number of cocaine users in 2009 – best estimates

	Population (in million)		Cocaine users	in % of population aged 15-64
	Total	aged 15-64		
Europe	804	550	4,683,000	0.85
West and Central Europe	480	322	4,213,000	1.31
South-East Europe	127	87	157,000	0.18
East Europe	200	143	313,000	0.22
North America	458	305	5,693,000	1.86
South and Central America and Caribbean	472	307	2,728,000	0.89
Asia	4,063	2,719	673,000	0.02
Oceania	36	23	300,000	1.29
Africa	1,008	566	1,570,000	0.28
TOTAL	6,841	4,471	15,647,000	0.35
Americas	929.51	612.53	8,421,000	1.37
Western Europe	482.15	320.62	4,060,000	1.27
Eastern Europe	322.07	229.19	624,000	0.27

Source: UNODC, calculations based on replies to the Annual Reports Questionnaire (ARQ) and other information sources.

Applying a more mechanistic approach to the available data (such as elimination of old estimates and use of the highest and lowest estimates of each subregion (10% percentile) to estimate the prevalence rates of non-reporting countries, irrespective of available qualitative information) gave a range of 15 to 19 million people for the year 2008. However, it is rather unlikely that large-scale cocaine use exists across China, Mongolia or in most of inland Africa. The 'best estimate' is thus close to the lower end of the range.

The next step was to estimate per capita consumption. This was based on the results of the 2005 input-output model,[82] linking demand and supply. These results were adjusted in line with more recent research.

The per capita use levels range from 6 and 7 grams of pure cocaine per year in East Europe and the Oceania region (where cocaine is expensive) to 35 grams in South America, Central America and the Caribbean (where cocaine is cheap). Per capita use of cocaine in North America (32 grams) and West and Central Europe (28 grams) seems to be relatively similar. No information has been found regarding per capita use of cocaine in either Africa or Asia. The number was set at 20 grams per user. Multiplying the per capita use levels with the number of cocaine users gives a total global demand for cocaine of 453 tons, including almost 180 tons for consumption in North America, 125 tons for West and Central Europe and more than 95 tons for South America (including the Caribbean and Central America). The estimates for Africa (31 tons) and for Asia (13 tons) are far lower.

[82] UNODC, *2005 World Drug Report, Volume 1: Analysis*, Vienna 20005, pp. 123-143.

Global cocaine consumption in 2009

	Cocaine users	annual per capita use (grams per users)	annual consumption in kg
Europe	4,683,000	27.9	130,721
West and Central Europe	4,213,000	29.7	124,960
South-East Europe	157,000	24.7	3,883
East Europe	313,000	6.0	1,877
North America	5,693,000	31.5	179,476
South and Central America and Caribbean	2,728,000	35.0	95,480
Asia	673,000	20.0	13,464
Oceania	300,000	7.3	2,186
Africa	1,570,000	20.0	31,396
TOTAL	15,647,000	28.9	452,723
Americas	8,421,000	32.6	274,956
Western Europe	4,060,000	30.2	122,598
Eastern Europe	624,000	13.0	8,122

Source: UNODC, international calculations based on replies to UNODC's Annual Reports Questionnaire (ARQ) and other information sources.

The consumption estimates of 453 tons at the global level were cross-checked against supply estimates. Global production of cocaine in 2009 was estimated by UNODC to have amounted to between 822 tons and 1,111 tons. (The difference is due to various assumptions about the yields of the coca leaf and the transformation of coca leaf to coca paste, cocaine base and cocaine hydrochloride). Global production must satisfy consumption as well as seizures. Global seizures – according to preliminary estimates – amounted to some 697 tons in 2009, which applying average retail purity would be equivalent to 274 tons, or applying average wholesale purity, would amount to seizures of 563 tons. Assuming – based on an analysis of UNODC's individual seizures database - that 85% of the cocaine is being seized at the wholesale level, purity-adjusted global seizures in 2009 amounted to some 520 tons. Adding seizures to consumption would result in global total demand for cocaine of 973 tons (range: 727 to 1,016 tons), which is almost identical with the global production estimates for 2009 (822 to 1,111 tons).

A subsequent step was to identify the retail and wholesale prices in each country, adjusted for purity, in order to arrive at a pure price per gram (retail level) or per kilogram (wholesale level). This information is also to be supplied to UNODC as part of the ARQ process. When only price ranges were reported, the midpoint price was used – unless official additional information was available to estimate the typical price. (For example, this was done for the United States, where the STRIDE database reports all prices of federally seized or purchased drugs, including their purity). When 2009 data were not available, data from the latest year available were used. The challenge was to deal with missing data. For this purpose, the unweighted average of the prices or purities reported in a subregion or region were applied. A number of consistency checks were performed to guarantee that retail prices were not lower than wholesale prices, which would be unlikely as traffickers tend to make profits, not losses.

The data, aggregated to the regional level, showed – as expected - high cocaine retail prices in the Oceania region (US$785 per pure gram) and low prices in South America, Central America and the Caribbean (US$39 per pure gram). Purity-adjusted cocaine prices – as reported by Member States - seem to be higher in East Europe than in West and Central

Europe. Nonetheless, purity-adjusted retail prices in West and Central Europe ($274 per pure gram) are higher than in North America (US$228 per pure gram), even though prices there have increased strongly after 2006. Average retail prices at the global level (weighted by consumption) amounted to US$193 per pure gram in 2009.

Purity-adjusted cocaine retail, wholesale and import prices per gram (2009)

	Consumption	Average retail price in US$	Average wholesale prices in US$		Average import price in US$	
	in kilograms	per gram	at the ounce level per gram	at the kilogram level per gram	from countries bought	in countries of origin
Europe	130,721	274	114	86	38	2.2
West and Central Europe	124,960	269	112	84	37	2.2
South-East Europe	3,883	360	153	117	63	2.2
East Europe	1,877	408	197	160	96	2.2
North America	179,476	228	69	35	15	2.2
South and Central America and Caribbean	95,480	39	11	6	2.4	2.2
Asia	13,464	179	101	87	27	2.2
Oceania	2,186	785	329	248	38	2.2
Africa	31,396	91	45	37	14	2.2
TOTAL	452,723	193	71	46	19	2.2
Americas	274,956	163	49	25	11	2.2
West Europe	122,598	268	111	83	36	2.2
East Europe	8,122	359	157	122	67	2.2

Source: UNODC, international calculations based on replies to the Annual Reports Questionnaire (ARQ) and other information sources.

The calculation of wholesale prices was more complex. The Annual Reports Questionnaire asks for wholesale prices per kilogram and for wholesale purity. This gives prices of around US$6 per pure gram in South America (including Central America and the Caribbean), US$35 in North America and US$84 in West and Central Europe. Research in the USA (likely true for most other countries as well) shows that dealers selling to end users typically do not purchase a kilogram of cocaine, as this would be too expensive, but rather purchase from a mid-level dealer at smaller quantities, ranging between 20 and 50 grams, which in the USA is typically an ounce (28.4 grams). Thus, in order to calculate the size of the retail market at the national level, it would not be particularly useful to calculate the difference between gram and kilogram prices as this would include a sizeable proportion of the national wholesale market. A more appropriate calculation of retail profits would be based on the price difference between ounce and gram prices. Detailed prices at several levels are, however, only collected in the USA. Analysing the STRIDE database for the years 2002-2006 when the US cocaine market was rather stable (in contrast to recent price hikes), data show that in each period, the ounce prices (per gram) (that is, the average prices charged for purchases between 20 and 50 grams) has been between the gram and the kilogram prices of cocaine, though far closer to the kilogram prices, expressed in grams. If the total difference between the gram and the kilogram prices (per gram) were set at 100 (0 for gram price and 100 for kilogram price,

expressed in grams), the ounce prices would fluctuate closely around 83. In other words, a good approximation of the ounce price is to calculate the difference between the retail and the kilogram prices, calculate 83% of this difference and then deduct this price difference from the retail price. This method was subsequently also applied to all other countries in order to obtain an estimate of the ounce prices.

The next challenge was the calculation of the typical import price. While the original import price in the Andean region is known (on average around US$2,200 per kilogram in 2009 or US$2.2 per gram), cocaine is not only bought directly from the Andean countries, but typically from various transit countries. Thus most of the cocaine destined for the USA, for instance, was bought in Mexico (that is, shipped by Mexican cartels from Mexico across the border into the USA). In order to get the typical import price, all information available about trafficking routes and transit countries was taken into consideration.

Multiplying the purity-adjusted retail prices with the amounts of cocaine consumed in each country gives the retail value. The calculations result in a global retail value of the cocaine consumed of US$87.5 billion for the year 2009. The largest markets are North America (US$40.9 billion or 47% of the global market), followed by the markets of West and Central Europe (US$33.7 billion or 41% of the global market). The other regions together account for just 12% of the total. Valued at 'ounce prices' (reflecting the market at which street dealers purchase the cocaine) the size of the global cocaine market amounted to US$32 billion; valued at kilogram prices, the value falls to US$21 billion. Valued at the import level, from where the cocaine was bought, drug traffickers had to pay some US$9 billion.

Value of cocaine consumed in 2009 (in US$ million)

	Retail value		Wholesale value (in mio US$)		Import value (in mio US$)	
	in mio US $	in %	based on 'ounce prices'	based on kilogram prices	Value in countries bought	Value in countries of origin
Europe	35,820.8	41%	14,909	11,219	4,996	288
West and Central Europe	33,655.3	38%	13,944	10,466	4,570	275
South-East Europe	1,398.6	2%	595	453	245	9
East Europe	766.9	1%	370	300	180	4
North America	40,930.6	47%	12,459	6,327	2,700	395
South and Central America and Caribbean	3,764.7	4%	1,084	610	229	210
Asia	2,410.9	3%	1,362	1,177	363	30
Oceania	1,715.9	2%	719	543	83	5
Africa	2,852.6	3%	1,411	1,157	444	69
TOTAL	87,495.5	100%	31,944	21,033	8,815	996
AMERICAS	44,695.4	51%	13,543	6,938	2,929	605
Western Europe	32,903.4	38%	13,631	10,230	4,448	270
Eastern Europe	2,917.4	3%	1,278	989	548	18

Source: UNODC, international calculations based on replies to the Annual Reports Questionnaire (ARQ) and other information sources.

The total value in the countries of origin of the cocaine consumed worldwide amounted to just US$1 billion. In other words, gross profits of US$86.5 billion were generated in 2009. ('Gross profits' here do not take into account any other expenses that may be accruing to drug traffickers; in economic terms, a perhaps more correct terminology would be the 'value-added'; however, this terminology has rather positive connotations which may not be appropriate when applied to extremely harmful and potentially deadly substances such as illicit drugs.)

The data calculated above now allow for the determination of gross profits at the various levels. The data show that most gross profits at the global level are made at the retail level (US$56 bn), more than twice as much as those (US$ 23 bn) generated at the wholesale level (difference of import and ounce prices). By far the largest gross retail profits are generated in North America (US$28 bn) and West and Central Europe (US$20 bn), accounting for 87% of global gross retail profits for cocaine.

The overall gross wholesale profits (US$23 bn) can be split into two components: wholesale profits at the national level (between the kilogram price and the ounce price: US$11 bn) and international wholesale profits (from the importing country to the national wholesalers: US$12 bn). In addition, gross profits are also made in shipping the cocaine from the countries of origin to various transit countries (US$8 bn).

Gross profits generated at the global level – and their distribution (unadjusted for seizures)

	Retail profits	Wholesale profits			Profits from country of origin to transit countries
	(from ounce to gram price)	Total wholesale profits (from import price to ounce price)	Of which: National wholesale profits	Of which: International wholesale profits (from import to kg price)	
Europe	20,912	9,913	3,690	6,223	4,708
West and Central Europe	19,711	9,374	3,478	5,895	4,296
South-East Europe	803	350	142	208	237
East Europe	397	190	70	120	176
North America	28,471	9,759	6,132	3,627	2,305
South and Central America and Caribbean	2,681	854	473	381	19
Asia	1,049	999	185	813	334
Oceania	997	636	176	460	78
Africa	1,442	967	254	713	375
TOTAL	55,551	23,129	10,911	12,218	7,819
Americas	31,152	10,614	6,605	4,009	2,324
West Europe	19,272	9,183	3,401	5,782	4,178
East Europe	1,639	730	289	441	530

Source: UNODC, international calculations based on replies to the Annual Reports Questionnaire (ARQ) and other information sources.

The gross profits calculated so far do not take into account that drug traffickers also lose some of their merchandise through seizures. These are substantial amounts in the case of cocaine. Global consumption of cocaine is estimated at 453 tons. Global cocaine seizures amounted to some 697 tons in 2009, which adjusted for retail purity would amount to pure cocaine seizures of 274 tons or – based on wholesale purity – to 563 tons. The best estimate for seizures – assuming that 85% took place at the wholesale level and 15% at the retail level - would amount to some 520 tons. If such seizures were to be multiplied with the average global wholesale price of US$46 per gram, the overall profits available for traffickers – and thus for laundering - would decrease by some US$24 billion.

The systematic incorporation of seizures into the analysis is difficult, however. Seizures are reported to UNODC in the Annual Reports Questionnaire as an annual total per country. The gross profits calculated above are based on the consumption in each country and do not include transit profits. Many seizures, however, take place for drugs in transit, rather than drugs used for consumption. Simply deducting the seizures from the gross profits realized from consumption would result in a negative balance for a number of transit countries – which would not be in line with the observation that funds are being created in such countries. In other words, seizures can only be subtracted once the model has been adjusted to take

transit profits into account. Another issue concerns the location of the seizures. Assume that the Spanish navy makes a big cocaine seizure off its coasts. What price should be used in the calculations - the wholesale price in Spain, the import price of the cocaine or some price in between? This means that the model presented above needs to be further refined. This work is ongoing.

Though final data are not yet available, the model results so far are sufficient to state that the proceeds of crime mostly accrue to organized crime groups in the countries where the drugs are consumed, and these groups launder a proportion of the proceeds in countries that provide attractive destinations for the money.

The proportion of proceeds from the cocaine trade that is laundered

The next question refers to the proportion of the amounts laundered out of the total proceeds generated. On this question, work is still underway to try to reach reasonable estimates based on empirical evidence.

What are the proportions that are available for laundering in the wholesale market? An analysis of the US cocaine market (see below) indicates that some 90% of US wholesale profits could have been subject to laundering. Subsequent calculations for other countries suggested, however, that the overall proportions available for laundering will be lower. Calculations of the distribution of profits at the retail level (which accounts for the bulk of the profits) suggest that the proportions available for money-laundering will be substantially lower (probably somewhere between 50% and 75%, or as low as 28% in the US, according to initial calculations).

A general approach to estimating the proportion of proceeds that are laundered would be to estimate average income per wholesaler, and per retailer, of illicit drugs in each country. Once ‘reasonable living expenses’ are subtracted, an estimate can be derived of the amount of ‘launderable’ money per capita, generated from crime. Summing these amounts over the total estimated numbers of wholesalers and retailers gives an estimate of the total amount of money available for laundering.

Simple model

Retail profits (P_r) / number of retail sellers (R)
= avg. gross profits per retailer (p_r)
Wholesale profits (P_w)/ number of wholesale trader (W)
= avg. gross profits per wholesaler (p_w)
Difference between average gross profits per retailer (p_r)
or per wholesaler (p_w) and a cut-off per capita income figure (i) reflecting reasonable living expenses [e.g. GDP per capita] gives the average per capita amounts available for laundering
for the retailer (l_r) = p_r - i or
for the wholesaler (l_w) = p_w - i

Total amounts available for laundering at retail level $L_r = l_r * R$
Total amounts available for laundering at wholesale level $L_w = l_W * W$

Proportion available of profits available for laundering at
Retail level $Q_r = P_r / L_r$
Wholesale level $Q_w = P_w / L_W$

Results from such a model can be misleading, however, as the 'average drug trafficker' does not exist. In fact, the distribution of drug traffickers tends to be uneven, with a few traffickers accounting for the bulk of the drugs sold on the market, and a large number of traffickers hardly earning the bare minimum to survive.

Against this background, a more sophisticated model is being developed. The basic steps here are the following:

a) estimate the number of traffickers involved at the retail and wholesale levels in key countries;
b) analyse the market structure;
c) apply the analysed market structure to the estimated number of traffickers at the retail and wholesale levels and introduce a cut-off rate ('reasonable living expenses') at which drug traffickers are able to launder money.

Number of traffickers

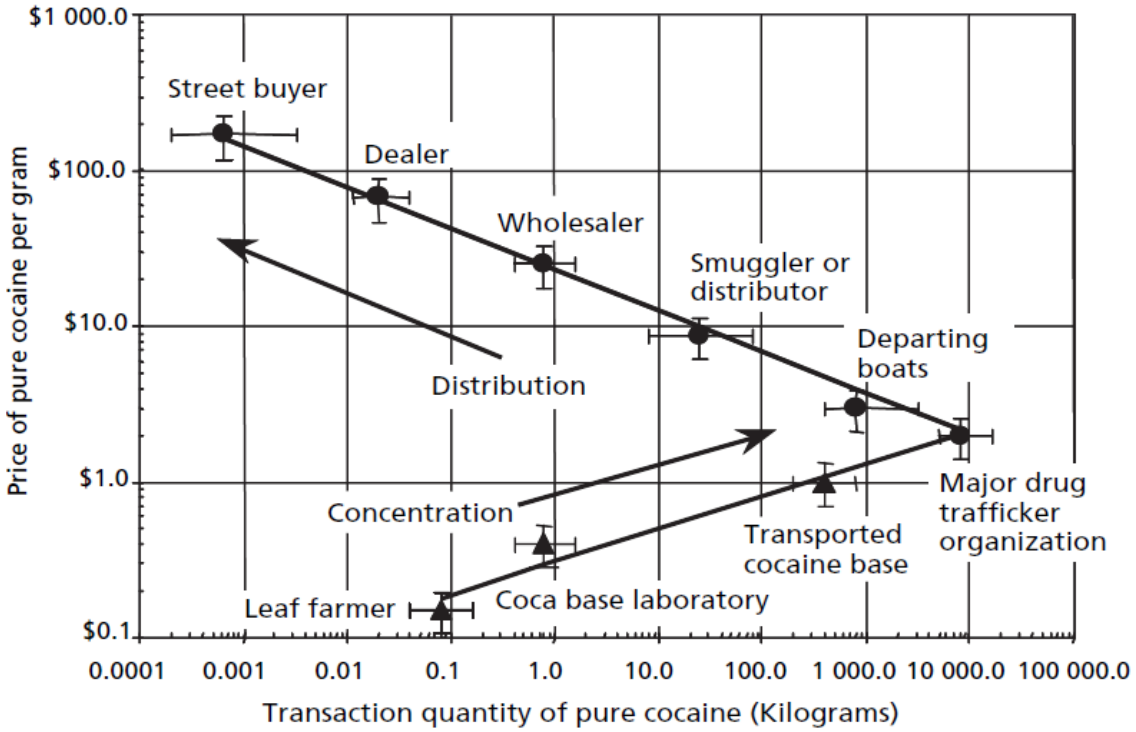
The first challenge is to estimate the number of traffickers. While significant amounts of research have gone into estimating drug production and the number of drug users over the last decade, little is known about the number of drug traffickers.

One important study of the cocaine market, which included estimates on the number of wholesalers at the various levels, was published by the US Institute for Defence Analyses (IDA) in the late 1990s. Their task was to provide the US military – and subsequently US drug control – with information on the cocaine market structure in order to identify potential weaknesses in the supply chain from the producer countries to the US street markets that could be targeted by various interventions.

One of the first findings of this research was that the cocaine market basically follows a power law distribution. Based on an extensive analysis of production, seizures, purities, typical transaction prices, the price structure along the supply chain and demand data, the IDA suggested that there may be, on average, 30-32 customers for each actor (drug trafficking

group) along the supply chain.[83] Given a cocaine using population of 5.4 million persons in the USA at the beginning of the new millennium, this would have resulted in some 180,000 street dealers, 6,000 wholesalers and 200 cocaine importers. The total cocaine dealing population in the USA would have thus amounted to some 186,200 traffickers.[84] Given a fall in the cocaine consumption population to 5.0 million persons in 2009, the application of the original model would have suggested a total number of 'cocaine dealers' of 161,300 in the USA in 2009. While the model and the statistical calculations behind are complex, a key question is whether the findings of this model can be confirmed by other empirical evidence?

Figure 1: Price quantity relationship of the cocaine market in the late 1990s

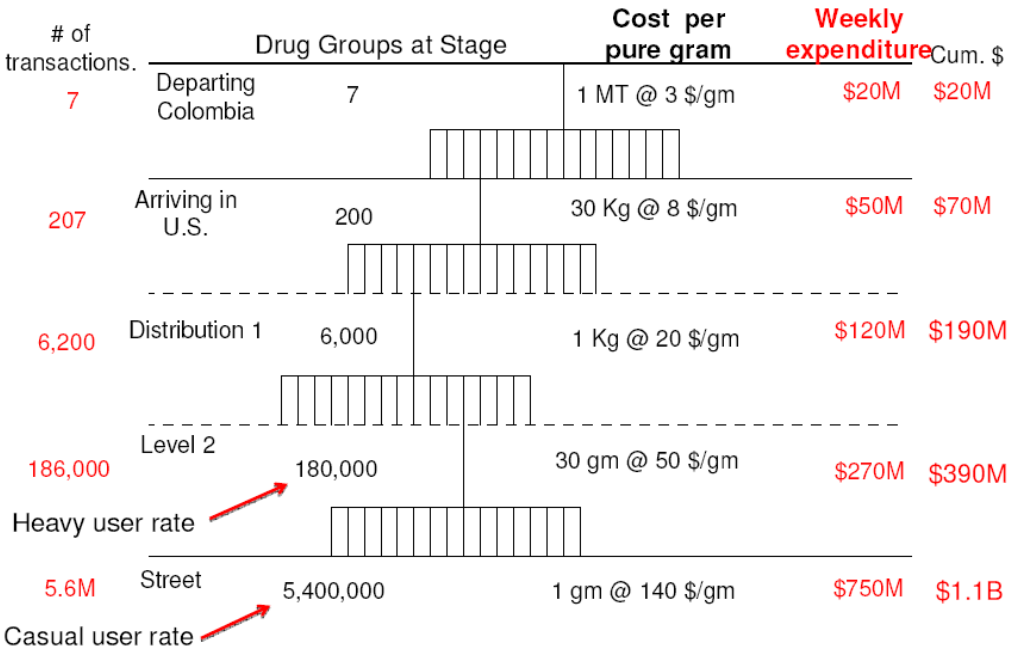


Source: R. Anthony and A. Fries (Institute for Defense Analyses), "Empirical modelling of narcotics trafficking from farm gate to street", United Nations, *Bulletin on Narcotics*, Nos 1 and 2, 2004, Illicit drug markets, pp. 1-48, New York 2006 .

[83] R. Anthony and A. Fries (Institute for Defense Analyses), "Empirical modelling of narcotics trafficking from farm gate to street", United Nation, *Bulletin on Narcotics*, Nos 1 and 2, 2004, Illicit drug markets, pp. 1-48, New York 2006 .

[84] B. Crane (Institute for Defense Analyses), "History of the US Cocaine Market", presentation given November 2009 in UNODC's Colombia country office.

Figure 2: Hierarchical market structure of the cocaine trade in the late 1990s and the late 2000s



Source: B. Crane (Institute for Defense Analyses), "History of the US Cocaine Market", presentation given November 2009 in UNODC's Colombia country office.

Jonathan Caulkins, another expert on the US cocaine market, came to different conclusions, based on a number of plausibility considerations (assuming, for instance, an average income per trafficker of US$50,000 and a size of the total US cocaine market of US$35 bn). According to his calculations, the number of cocaine dealers in the USA may amount to some 700,000 full-time cocaine traffickers, which – taking the existence of part-time traffickers into consideration - would raise the total figure of persons involved in cocaine trafficking to 1 million people in the USA, possibly more.[85]

Caulkins' estimates suggest that there are on average five customers for each cocaine dealer. This may seem low at first sight, but it must be taken into account that a large number of cocaine users are, in fact, also dealing in cocaine, though in small quantities only. Moreover, not all customers have just one dealer. Research undertaken in the USA in 2000 found that 34% of those arrested and admitting to having consumed cocaine over the last 30 days had more than one dealer. This proportion rose to 64.5% among those admitting to having consumed crack-cocaine. The average number of dealers that drug users had over the last 30 days was, on average, about two (1.8) in the case of cocaine and three (3.2) in the case of crack-cocaine.[86] But this does not explain the difference.

In comparing the results of Caulkins with those of the Institute for Defense Analyses (IDA), one must also take into account that the IDA actually speaks of wholesalers as 'criminal groups' rather than individuals - and some of the criminal groups in the USA are rather large.

[85] J. Caulkins, 2002, "Law Enforcement's Role in a Harm Reduction Regime," *Crime and Justice Bulletin*, Number 64, New South Wales Bureau of Crime and Justice Research; J. Caulkins, "Do Drug Prohibition and Enforcement Work?" White paper published in the "*What Works*?" series, 2000, Lexington Institute, Arlington, Virginia, USA; J. Caulkins, and P. Reuter, "Toward a Harm Reduction Approach to Enforcement," *Safer Communities*, Vol. 8, No. 1, 2009, pp.9-23.
[86] US Department of Justice, *Arrestee Drug Abuse Monitoring* (ADAM) - Annual Report 2000, http://www.ncjrs.gov/pdffiles1/nij/193013.pdf

The US National Gang Intelligence Center reported in its National Gang Threat Assessment 2009 that there were some 33,500 gangs in the USA, comprising some 870,000 members (on average 26 members per gang) and that 'much gang-related criminal activity involved drug trafficking.' The report also stated that gang members were the primary retail-level distributors of most illicit drugs, including cocaine, in the country, though some of them are also involved in wholesale trafficking.[87]

Starting with the estimate of some 870,000 gang members (based on the aggregation of sub-regional estimates) and assuming that 75% of them were involved in cocaine trafficking, one would obtain an estimate of 650,000 people. Adding another 100,000 non-gang members would give an estimate of some 750,000 cocaine traffickers.

Another method would be to look at the number of persons arrested for possession of cocaine (federal and state arrests) and to link this to the number of current cocaine users (past month users). This gives a ratio of 12.4.% for the USA in 2009. Applying this ratio to the number of persons arrested for cocaine trafficking gives an estimate of around 757,000 cocaine traffickers or, on average, 6.6 cocaine traffickers per user.

A number of immediate question arise. Is it fair to assume that the likelihood of the police to arrest a regular cocaine user is equal to the likelihood of the police to arrest a cocaine trafficker? One could argue that the police tends, in general, to pursue traffickers more vigorously than consumers. This would increase the interception rate for traffickers, and thus reduce their estimated number. This would mean a higher interception rate for traffickers and – given a certain number of reported arrests for trafficking – a lower estimate of the number of traffickers. However, it can be also argued that traffickers are far more cautious and knowledgeable about police tactics, and thus face a lower risk of arrest. This would lead to a lower interception rate, and thus to a higher estimates on the number of traffickers. Moreover, the likelihood of a trafficker being arrested may differ as he is usually only arrested once a year, and then put to jail for longer periods, while a consumer may be arrested several times a year. Traffickers as a group may thus face a lower risk of being arrested than consumers, leading to lower interception rates, and thus to higher estimates based on any given number of persons arrested. In short, there is no conclusive answer whether the interception rate of a trafficker should be higher or lower than the interception rate of a user as there are a number of biases going into opposite directions. Thus, it may be fair to assume that the overall interception rates for traffickers may not differ that drastically from those of cocaine users.

Can such estimates based on arrest data be brought into line with the IDA estimates, which were based on a sophisticated model of the US cocaine market? The original IDA estimate suggested that there were some 186,200 'groups' involved. It would thus suffice to assume that each group had, on average, 4.1 members to reach a total number of 757,000 persons involved in cocaine wholesale in 2009. Working with the adjusted figures of 161,300 groups (based on a lower number of cocaine users for the year 2009), the ratio would slightly increase to, on average, 4.7 persons per group. Again, this does not seem unrealistic. Given the well-established presence of large trafficking groups, the IDA estimates of the number of groups involved do not contradict the estimate of some 757,000 individuals involved in cocaine trafficking (some as individuals, some as members of a criminal group).

[87] National Gang Intelligence Center, *National Gang Threat Assessment 2009,* http://www.fbi.gov/stats-services/publications/national-gang-threat-assessment-2009-pdf

The estimation method based on arrest data and (monthly) prevalence estimates was subsequently adopted as the currently preferred method. It seems to show reasonable results and could also be replicated in a number of other countries. Applying this method to 16 (industrialized) countries gave an average ratio of 7.1 cocaine traffickers per user (versus 6.6 in the USA).

There are also some promising alternative approaches to estimating the number of traffickers which could yield interesting results in the future. Carla Rossi and her team from the University of Rome[88] have started to experiment with a number of capture-recapture models, in combination with truncated Poisson models and the Chao and the Zelterman estimators to arrive at estimates of the number of drug traffickers.

One source model: situation

$$f_1, f_2, \ldots, f_k$$

frequencies of units identified 1,2, …,k times

f_0 is unobserved

look at associated probabilities. $p_1, p_2, \ldots, p_k$

p_0 is unknown

Let:

$$n = \sum_{i=1}^{k} f_i, \quad m = \sum_{i=1}^{k} i f_i, \quad N = f_0 + f_1 + \ldots + f_k.$$

Horvitz-Thompson estimator under Poisson homogeneity

- How to estimate N, the size of drug users population?
- $f_j \quad j = 0,1,2\ldots,k$ are generated by the same Poisson distribution with parameter λ.
- The MLE of λ, for the zero-truncated Poisson distribution, leads to $\hat{p}_0 = e^{-\hat{\lambda}}$

Horwitz-Thompson (1952) estimator follows

$$\hat{N}_{HT} = n/(1 - \hat{p}_0)$$

[88] C. Rossi, L. Di Censi, N. Esposito, F. Mascioli and D. Scacciatelli, Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata and G. Serpelloni, N. Balestra, B. Genetti, Department of Antidrug Policy of the Presidency of the Council of Ministers, Italy, "Estimating the size of the dealers population for monitoring the drug market: a comparison between different metropolitan areas in Italy", presentation given to UNODC, November 2010.

Including heterogeneity: Zelterman and Chao estimators

- Zelterman (1988) upper bound estimator

$$\hat{N}_Z = \frac{n}{1 - \exp(-2 f_2 / f_1)}$$

with our data f_1 has been obtained by multiple imputation on the basis of λ

- Chao (1987, 1989) lower bound estimator

$$\hat{N}_C = n + f_1^2 / (2 f_2)$$

- The influence of the persons often seen is weighted down in both estimators which are robust against heterogeneity

Source: C. Rossi (Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata) and Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata (Dept of Mathematics, University La Sapienza, Rome), "Capture-recapture methods to estimate prevalence indicators for evaluating drug policies", presentation given to UNODC, April 2010.

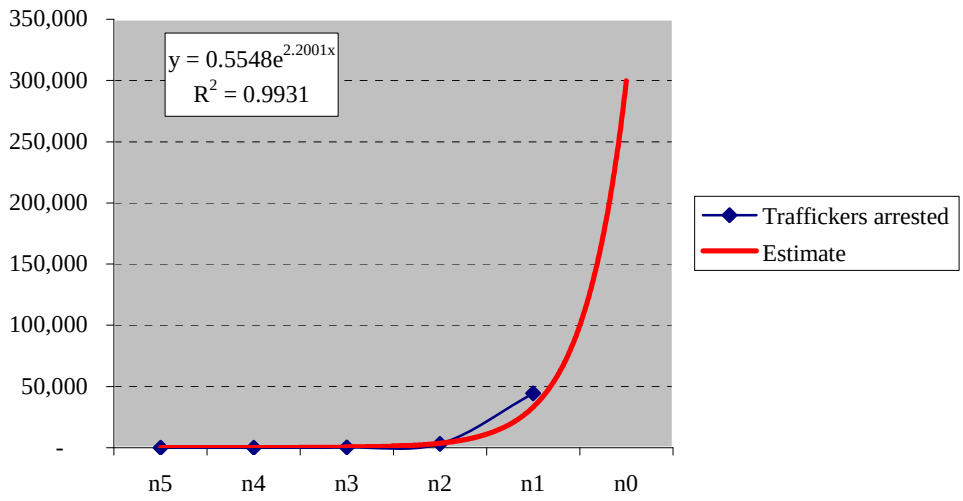
The basic data requirements here is a distribution of the number of times a drug trafficker was arrested in the past. The minimum requirement is a distribution of the number of persons arrested for drug trafficking (i) for the first time and (ii) arrested before.[89]

More precise data estimates can be obtained once a more detailed distribution is available. Data for Italy for 2009 showed the following distribution of arrests (total 48,019): n1: 44,460; n2: 3,201, n3: 315, n4: 36; n5: 7. Based on this data the Chao estimate of the total number of drug traffickers gives an estimate of 361,561 drug traffickers for Italy.[90]

If such detailed breakdowns of arrest data are available, even some far simpler approaches may lead to reasonably good approximations. Applying a simple exponential regression to the data shown above, gives an estimate of around 300,000 traffickers not yet arrested, and thus a total estimate of around 348,000 drug traffickers for the year 2009.

[89] Carla Rossi (Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata) and Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata (Dept of Mathematics, University La Sapienza, Rome), "Capture-recapture methods to estimate prevalence indiators for evaluating drug policies", presentation given to UNODC, April 2010.
[90] Source: Carla Rossi (Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata) and Centre for Biostatistics and Bioinformatics, University of Rome Tor Vergata (Dept of Mathematics, University La Sapienza, Rome), "Capture-recapture methods to estimate prevalence indicators for evaluating drug policies", presentation given to UNODC, April 2010.

Figure 3: Estimates on the number of drug traffickers in Italy in 2009 based on exponential regression



Source: UNODC calculations based on Italian arrest data from the Central Direction of Criminal Police of the Italian Ministry of Interior.

The practical problem with these models so far has been that most countries do not seem to have such distributions of arrest statistics readily available - though this may change once the utility of such statistics is proven.

A remaining question is the distribution between the number of retailers and wholesalers among the drug traffickers.

Again, very little has been found in the literature. Taking the licit drugs industry (pharmaceutical industry, pharmacies, drug stores) as a starting point for comparisons, data for the USA suggests that 85% of such establishments operate in the retail sector and 15% in the wholesale sector, thus giving a ratio of 5.7 retail enterprises for 1 wholesale enterprise. Would such a ratio also be expected for the illicit sector? Probably not.

The IDA model – as discussed before – arrived at a 32 : 1 or 30 : 1 ratio, across all levels along the supply chain, and thus also between the retail and the wholesale sector, that is, 30 retailers for one wholesaler. The problem is that the average size (in terms of manpower) of a criminal group at the retail level versus the size of such groups at the wholesale level is not known. There are indications that criminal groups at the wholesale level tend to be much larger than those at the retail level. A 30:1 ratio would thus not hold in terms of persons involved.

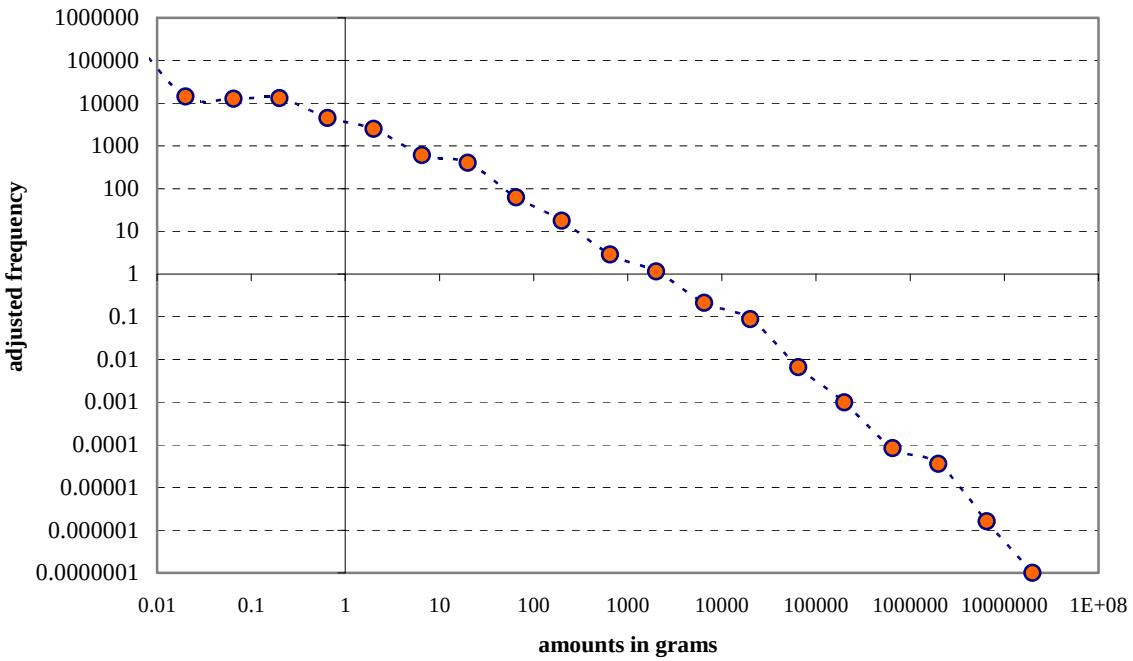
So, how could the relationship be determined ? One possible approach is to analyse arrest and sentencing statistics. US data show that about 10% of persons arrested for drug trafficking are arrested for federal offences – which tend to be far more severe than offences at the state level. Similarly, the number of persons incarcerated in a federal prison account for about 10% of persons charged for drug trafficking offences. The numbers of persons sentenced to federal prison for more than one year are equivalent to 9.6% of all trafficking offences. All of this suggests that there could be 10 : 1 ratio of retailers to wholesalers in the USA. Jonathan Caulkins, in personal communication with the author, also spoke of a 10:1 ratio.

Such a 10:1 ratio, however, does not seem to apply to other countries. Data for Austria, for instance, suggest that 15% of convicted traffickers got a sentence of 1 year or more, which would be equivalent to a ratio of 6.8 retailers for 1 wholesaler, assuming that persons convicted for more than 1 year have typically dealt in rather large quantities. Data for Germany also gave similar results.

Market structure

As the research of the Institute of Defense Analysis has shown, the cocaine markets - as illegal drug markets in general - are characterized by a power-law structure. This is, inter alia, reflected in seizures. The power-law structure is particularly visible in the wholesale market, less so in the retail market (smaller quantities).

Figure 4: Frequency distribution of cocaine seizures in the USA, 2004-2006 (logarithmic scale)

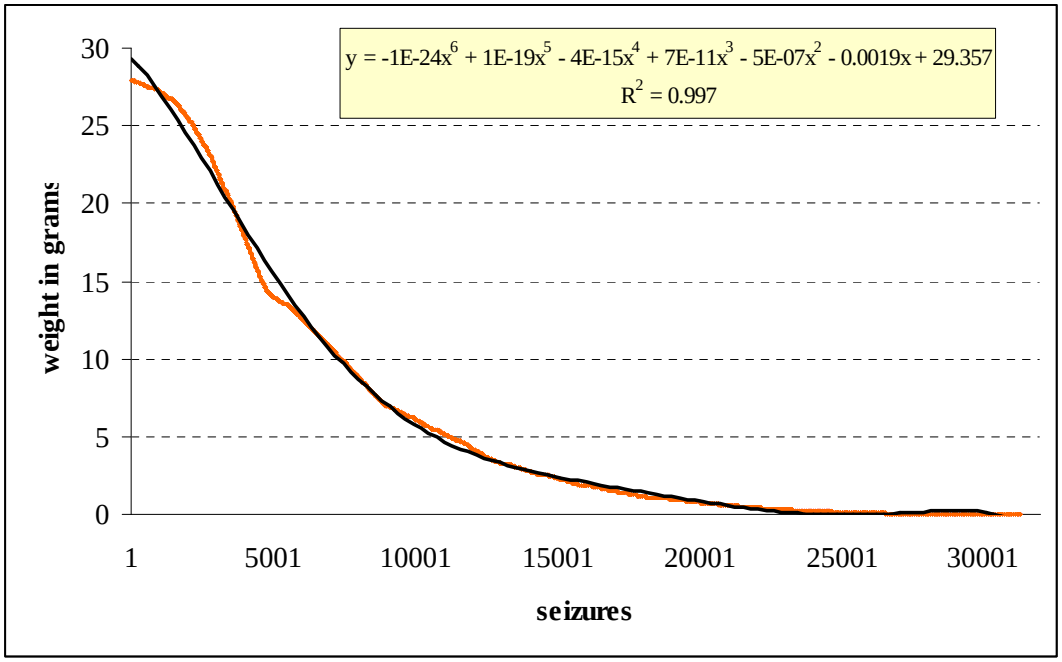


Source: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database).

As a next step, the retail market segment will be defined. According to US data, there is a frequency of purchases at the ounce level (28.4 grams), and then again at the 1 gram level. This suggests that the retail market mainly takes place by retail sales purchasing around an ounce of cocaine, and then selling a gram of cocaine to the end users.

The distribution of the retail segment of the market (as reflected in seizures) are shown in the graph below. They follow very closely 6 binomial regression curve.

Figure 5: Distribution of US cocaine seizures in the retail market segment (2004-2006)



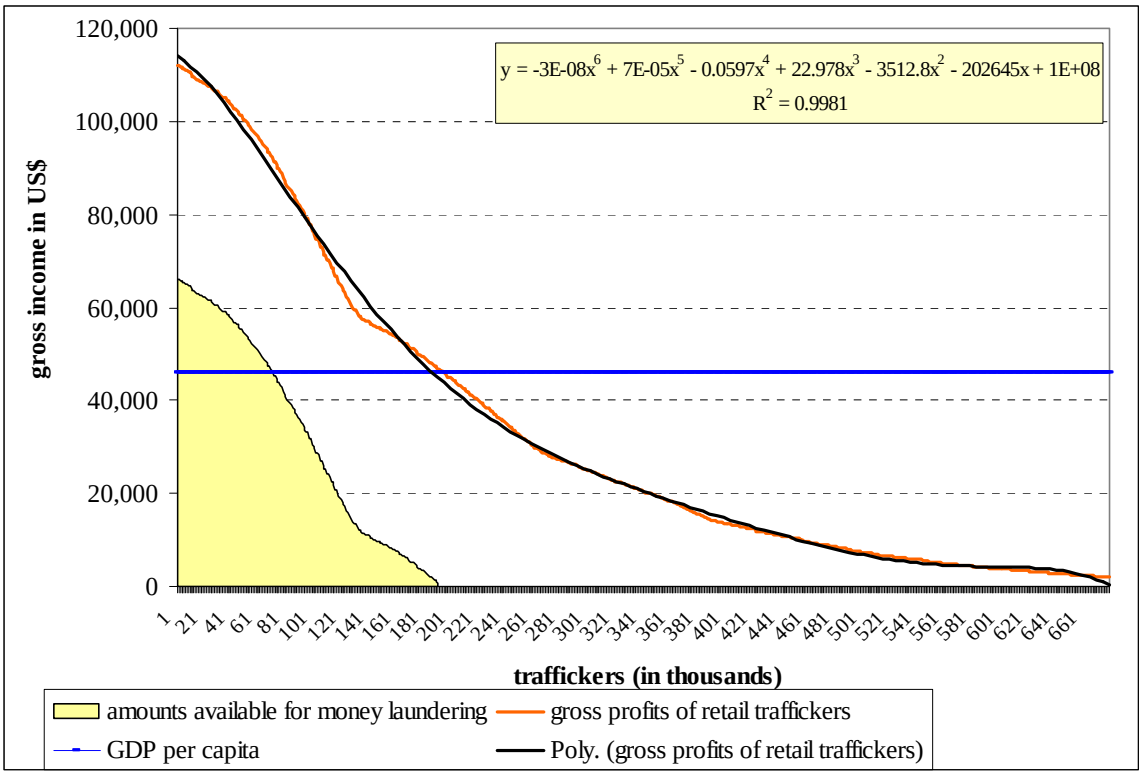
Source: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database).

Application of market structure to total retail sales and number of retail traffickers

As discussed before, the total number of cocaine traffickers in the USA has been estimated to amount to 757,000 of which 90% or 680,000 are thought to be involved in retail trafficking activities. The total gross retail profits for cocaine (defined as the difference between the gram prices and the ounce prices, multiplied with the amounts consumed in the USA) amount to some US$22.5 bn – a large amount. Simply dividing the gross profits by the number of cocaine retail traffickers would result in per capita profits of US$33,000, a rather small amount which would hardly leave any money available for laundering. In fact, the GDP per capita in 2009 was some US$ 46,000, that is, far higher than the per capita income of the retail cocaine traffickers in the USA. But can it be true that no earnings made from US retail sales could be laundered? Probably not.

Assuming that the distribution of the seizures, discussed above, is a fair reflection of the structure of the US cocaine market, the distribution can also be used to allocate the total US retail market profits to the individual drug traffickers. This is shown on the next graph. In addition, a cut-off rate (defined as the GDP per capita) was introduced. This model suggests that indeed the majority of the retail sellers (77%) earn less than the GDP per capita. However, amounts generated above GDP per capita by the remaining 23% of the retail traffickers are sufficient for laundering 28% of total retail profits: US$6.2 bn.

Figure 6: Distribution of retail traffickers' income in the USA in 2009

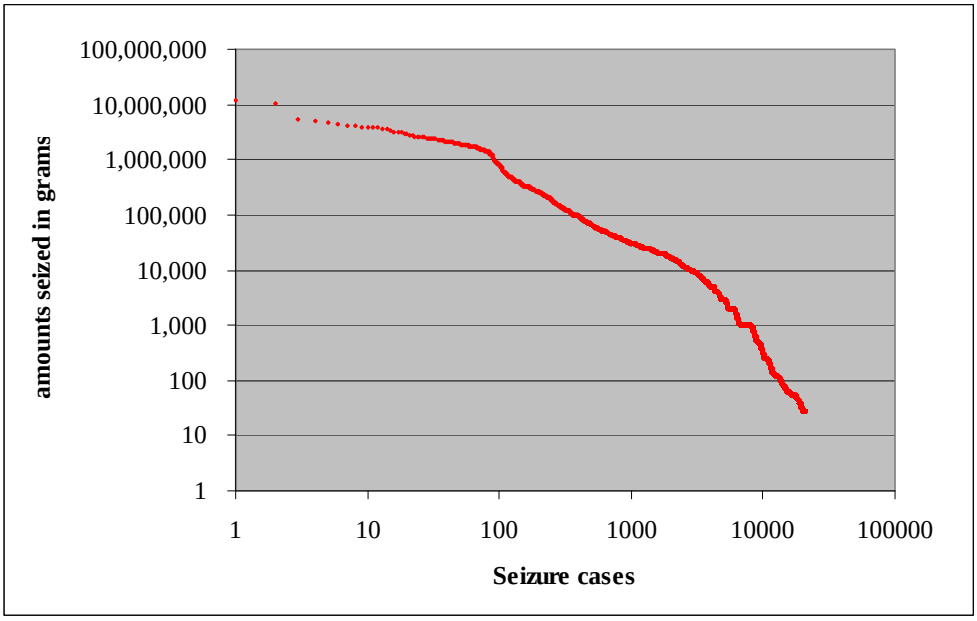


Sources: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database), World Bank and study estimates.

The same approach was also applied to the wholesale sector. Wholesales were defined as all seizures amounting to more than 28 grams.

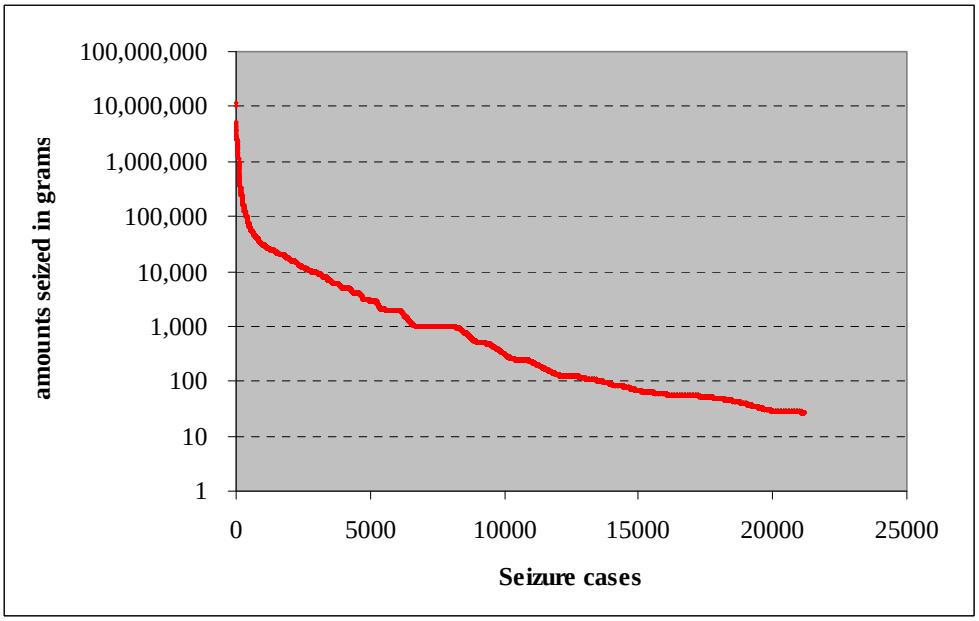
As discussed earlier, data show that the cocaine wholesale follow a power-law structure, that is, they are far more concentrated than the retail sector. Logarithmic scales must therefore be used to be able to identify the seizure patterns.

Figure 7: Distribution of cocaine wholesale seizures in the USA (2004-2006) - x and y axes: logarithmic scales



Source: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database).

Figure 8: Distribution of cocaine wholesale seizures in the USA (2004-2006) - y axis: logarithmic scale

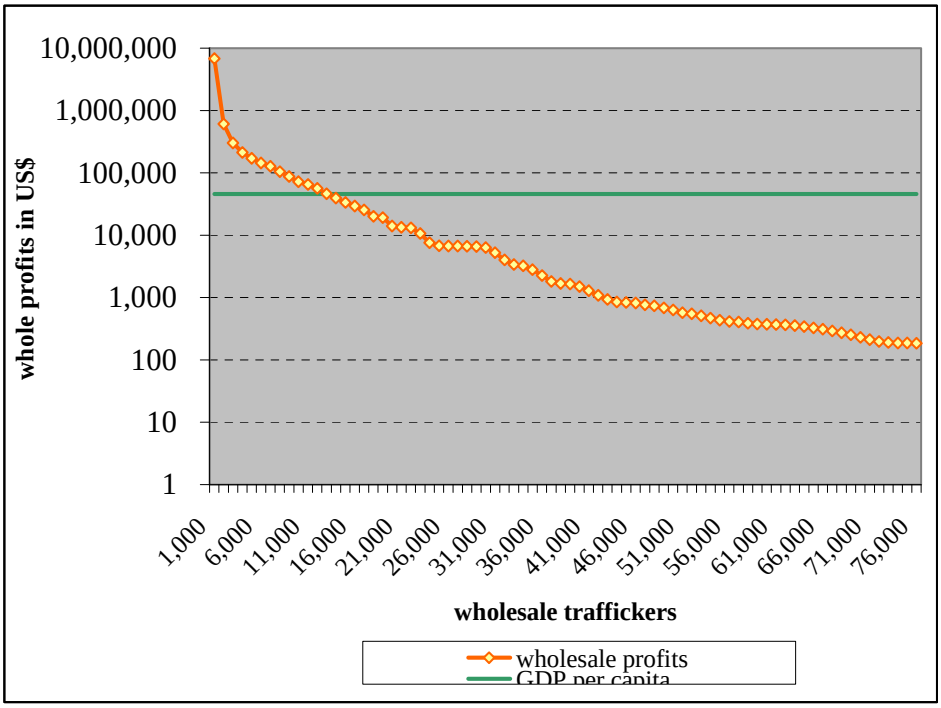


Source: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database).

The next task has been again to use the shape of the seizures curve to allocate the profits made at the wholesale level to the individual cocaine wholesaler. The total number of cocaine wholesalers in the USA was estimated at around 75,000. Based on this market structure, a majority of wholesalers were again earning less than the GDP per capita. The latter probably includes a large number of persons who work as mules or part-time traffickers for criminal organizations. At the same time, a few major players in the market seem to earn fortunes. As a consequence, the model suggests that 90% of the global cocaine profits made at the

wholesale level are actually available for money-laundering purposes. Similar exercises for other countries, based on the UNODC individual seizures database, are ongoing.

Figure 9: Distribution of cocaine wholesale traffickers' income in the USA in 2009



Source: US Drug Enforcement Agency, Retrieve Information from Drug Evidence (STRIDE database).

3) Socio-economic impact of financial flows emerging from drug trafficking and other transnational organized crime

The main threat emerging from financial flows related to transnational organized crime activities is linked to the ability of such flows to foster the economic viability of the underlying crime activities, thus contributing to their spread and expansion. This can be compared to the need for oxygen for human beings and most animals: without oxygen, most life on earth would not be possible. Similarly, without financial flows emerging from drug trafficking and other transnational organized crime activities, most transnational crime would not take place.[91] In addition, financial flows linked to transnational organized crime have negative socio-economic implications in their own right. Subsequent money-laundering activities may pose potential threats for the financial stability of some of the countries concerned.

The analysis of the socio-economic implications will start with an analysis of the implications of criminal financial flows for the spread of various forms of organized crime, and how such crimes affect society. The socio-economic implications of criminal financial flows invested in the legal economy will be discussed in a subsequent sub-chapter. This will be followed by an analysis of the socio-economic consequences of money-laundering, notably that taking place in foreign jurisdictions.

a) Implications of illicit financial flows contributing to the spread of transnational organized crime

The threats for society emanating from illicit financial flows lie primarily in the underlying criminal activities that such flows promote. These underlying crimes – which would not have been committed without the incentive of forthcoming financial benefits - pose serious socio-economic threats to societies across the globe.

The actual dangers of these flows for society depend much on the nature of the underlying criminal activities. The socio-economic impact of the actual amounts generated by transnational organized crime is less significant than the underlying criminal activities.

…notably financial flows resulting from trafficking in drugs

An analysis of criminal cases in the Netherlands (1999) suggested that criminals used, on average, 7% of their total criminal income for consumption and lifestyle, 57% for 'conventional investment' (property, bank accounts, fixed interest assets and securities), 23% for 'irregular business' activities (legal or illegal) and 9% for hoarding money, mainly for subsequent reinvestment into illegal activities. In this context, the tendency of drug dealers to hoard money for subsequent reinvestment into the drug business (77% of all drug-related cases showed indications of some hoarding) was more pronounced than the general tendency of criminals to hoard money for reinvestment into criminal activities (54% of all cases).[92] This

[91] Reference Group Meeting, January 2011.

[92] J. R. Meloen, H. Landman, J de Miranda,.van Eekelen and S. van Soest, *Buit en Besteding, Een empirisch onderzoek naar de omvang, de kenmerken en de besteding van misdaadgeld*, Den Haag: Reed Business Information, 2003, p. 246, quoted in Brigittte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 126.

suggests that the overall proportion of money used by drug traffickers for reinvestment into their business sector is higher than for criminals in general. In other words, income from drug trafficking seems to promote drug trafficking stronger than income from other crimes fosters other crimes.

… resulting in health costs

Trafficking in illegal drugs – prompted by expectations of huge financial benefits - contributes, first of all, to a serious health problem worldwide. Transnational organized crime links producers with consumers of illegal drugs. A significant number of people worldwide suffer from the negative health consequences of drug consumption. According to WHO data, some 200,000 people per year die from drug abuse. More than 11 million disability-adjusted life-years are lost every year due to consumption of drugs (opiates, cocaine and amphetamines), equivalent to some 19 years per 100 drug users, far more than for tobacco (5 years per 100 users) or for alcohol (2 years per 100 users).[93] For the United States alone, there were some 31,400 direct drug-induced deaths in 2007, up from 19,100 in 1999. This was higher than the number of deaths due to homicides (18,400) or deaths due to firearms (31,200, including accidents with firearms) or direct alcohol induced deaths (23,200) in 2007.[94] Russian figures suggest that some 30,000 people died from heroin abuse in 2009.[95] There were more than 7,000 drug overdose deaths in the EU in 2007[96] though this figure would rise further if all drug-related deaths were included.

… and overall high socio-economic costs related to drug abuse

The huge financial flows generated via drug trafficking to consumers also put a significant financial burden on to the drug users. The users can often only pay for their consumption by committing various forms of acquisitive crime. Data for Australia show for instance that 0.1% of the general population aged 14 years or older used heroin in the previous month.[97] Drug tests among adult detainees across the country[98] – in contrast - revealed that opiate traces in urine samples was found for 11% of the tested detainees in 2008,[99] suggesting that the proportion of heroin use among detainees is more than 100 times larger than among the general population.

Similarly, in the USA, about 1% of the male population (aged 12 years and above) consumed cocaine in the previous month[100] while, at the same time, almost 29% of males arrested (mostly related to various forms of acquisitive crime) in 2008 were found to have consumed cocaine (based on urine tests conducted among arrestees in 10 US cities).[101] A previous study – based on data for 2002 – suggested that 30% of the burglary cases in the USA, 29.6% of the larceny cases, 27.2% of the robbery cases and 6.8% of the motor vehicle thefts were

[93] World Health Organisation, *World Health Report 2002*, Geneva 2003.
[94] ONDCP, *Fact Sheet – Consequences of Illicit Drug Use in America*, December 2010.
[95] Victor Ivanov (Federal Drug Control Agency) quoted in *BBC News*, "Russia blames Nato for heroin surge from Afghanistan" , 27 February 2010.
[96] EMCDDA, *Statistical Bulletin 2010*, Lisbon 2010.
[97] Australian Institute of Health and Welfare, *2007 National Drug Strategy Household Survey – Detailed Findings*, December 2008.
[98] Locations for the tested detainees were: Adelaide, Alice Springs, Bankstown, Brisbane, Darwin, East Perth, Footscray, Parramatta and Southport.
[99] Australian Institute of Criminology, *Drug use monitoring in Australia: 2008 annual report on drug use among police detainees*, Canberra 2010.
[100] SAMHSA, 2008 National *Survey on Drug Use & Health, Volume 1. Summary of National Findings*, Office of Applied Studies, NSDUH Series H-38A, HHS Publication No. SMA 10-4856 Findings. Rockville, MD, USA.
[101] ONDCP, Arrestee Drug Abuse Monitoring Program – ADAM II, *2008 Annual Report*, April 2009.

attributable to drug abuse, as well as 15.8% of the homicides, 5.1% of the assaults and 2.4% of the rapes in the country. [102]

A study on the overall economic costs related to drug abuse in the United States arrived at a figure of more than US$180 billion (or US$650 per capita) for the year 2002, equivalent to 1.7% of the US gross domestic product (GDP) in that year.[103] The economic costs related to drug abuse in the USA alone were thus higher than the GDP of 172 countries and territories in 2002 (out of 198 countries and territories for which the World Bank provided data), and similar in magnitude to the total GDP of countries such as Saudi Arabia, Norway or Denmark.[104]

Expressed as a percentage of GDP, the economic losses due to drug abuse were calculated to have been even higher in the United Kingdom (1.8% of GDP in 2000), though in absolute numbers they were lower (£12 billion or US$18 bn, about US$ 450 per capita).[105] These figures were significantly higher than a decade earlier. An investigation commissioned by the European Community identified the costs of drug abuse to be some $3.2 billion for the UK in 1988,[106] equivalent to 0.4% of GDP or about $60 per capita. A study for the year 2003/2004, however, demonstrated far higher costs related to drug abuse in the new millennium. 'Class A drugs' (cocaine, heroin, ecstasy, LSD etc.) were found to cost £15.4 bn (US$ 26 bn) for England and Wales for the fiscal year 2003/2004,[107] equivalent to 1.8% of GDP. A subsequent study on the social and economic costs of drug abuse in Scotland showed a figure of £3.5 bn for the year 2006, equivalent to some 3.8% of GDP.[108] Almost 96% of these costs were caused by problem drug users. These data, however, also included estimates for the 'emotional pain' experienced by the families of drug users who died as a result of their drug use[109] as well as estimates for various costs to victims of crime emerging from assaults, stealing, fraud and forgeries related to drug abuse. Excluding such 'wider costs to society,' the drug abuse-related costs still amount to more than £1.7 bn or 1.9% of GDP.

Calculations for other countries showed lower figures. For Australia,[110] for instance, the costs amounted to around 1% of GDP in 2002,[111] up from a figure equivalent to 0.4% of GDP in 1992,[112] for Germany, they amounted to some 0.4% of GDP[113] and for Canada, the costs were

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[102] Study quoted in Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004.
[103] Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004, p. 64.
[104] World Bank, *Global Development Indicators*, Washington, February 2011.
[105] C. Godfrey, G. Eaton, C. McDougall, and A. Culyer, *The Economic and social costs of class A drug use in England and Wales, 2000*. Home Office, London 2002, quoted in National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004.
[106] Commission of the European Communities, *The Social and Economic Costs of Drug Abuse in the United Kingdom and the Netherlands*, London, 1990, p. 2.
[107] Loma Gordon, Louise Tinsley, Christine Godfrey, Steve Parrott, "The economic and social costs of Class A drug use in England and Wales, 2003/04", in Home Office, "Measuring different aspects of problem drug use: methodological development", 2nd edition, *Home Office Online Report* 16/06, London 2006, pp. 41-45.
[108] Jane Case, Gordon Hay, Christine Godfrey, Steve Parrott, *Assessing the Scale and Impact of Illicit Drug Markets in Scotland*, Glasgow, October 2009. http://www.scotland.gov.uk/Publications/2009/10/06103906/0
[109] EMCDDA, Annual Report 2010: *The state of the drugs problem in Europe* (Chapter on 'Social Costs of Drug Use'), Lisbon 2010, pp. 28-29.
[110] D. Collins and H. Lapsley, H., *Counting the Cost: Estimates of the Social Costs of Drug Abuse in Australia, 1998-9*. Report for the Commonwealth Department of Health and Ageing, Canberra 2002.
[111] E. Robson Single, L., X. Xie, J Rehm, "The Economic Costs of Alcohol, Tobacco, and Illicit Drugs in Canada," 1992, *Addiction* 93: 983-998.
[112] David. J. Collins and Helen M. Lapsley, "The social costs of drug abuse in Australia in 1998 and 1992", *National Drug Strategy*, Report prepared for the Commonwealth Department of Human Services and Health, Feb. 1996.
[113] Karl-Hans Hartwig, Inge Pies, *Rationale Drogenpolitik in der Demokratie*, (J.C.B. Mohr Verlag),

0.2% of GDP in 1992[114], rising to 0.7% in 2002.[115] Calculations for France resulted in a figure of €2.8 bn for the year 2000, equivalent to 0.18% of GDP, up from a figure of French francs 13.3 bn (€2.0 bn) or 0.16% of GDP in 1997.[116] Estimates for Spain for 1997 suggested that drug abuse cost the Spanish economy "at least 0.2% of GDP".[117] A number of economic costs estimates of drug abuse were also undertaken for countries in Latin America by CICAD. These estimates showed cost estimates ranging from 0.1% of GDP in Mexico in 2003 to figures equivalent to 0.22% of GDP in Chile (2003), 0.27% of GDP in El Salvador (2004) and 0.5% of GDP in Costa Rica (2003).[118]

Economic costs of drug abuse, expressed as a percentage of GDP in selected countries

Country	Year	as a percentage of GDP
Scotland	2006	1.9%* (3.8%)**
England and Wales	2003/2004	1.8%
United States	2002	1.7%
Australia	1998	1.0%
Canada	2002	0.7%
Costa Rica	2003	0.5%
Germany	1992	0.4%
El Salvador	2004	0.3%
Spain	1997	0.2%
Chile	2003	0.2%
France	2000	0.2%
Mexico	2003	0.1%
Unweighted average		0.7%
Overall average (weighted by GDP)		1.2%

* productivity losses ('costs to the economy'), criminal justice costs, health and social care costs; ** including 'wider costs to society' such as the emotional and physical pain endured by the families of drug users that lost their lives and the 'victim costs' for the crimes committed by drug users (assaults, thefts, frauds etc)..

Sources: J. Case, G. Hay, C. Godfrey and S. Parrott, *Assessing the Scale and Impact of Illicit Drug Markets in Scotland*, Glasgow, October 2009; L. Gordon, L. Tinsley, C. Godfrey and S. Parrott, "The economic and social costs of Class A drug use in England and Wales, 2003/04", in Home Office, *Measuring different aspects of problem drug use: methodological development*, 2nd edition, Home Office Online Report 16/06, London 2006, pp. 41-45; Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004; D. Collins and H. Lapsley, *Counting the Cost: Estimates of the Social Costs of Drug Abuse in Australia, 1998-9*, Report for the Commonwealth Department of Health and Ageing, Canberra, 2002; K-H. Hartwig and I. Pies, *Rationale Drogenpolitik in der Demokratie*, J.C.B. Mohr Verlag, Tübingen, 1995; CCSA-CCLAT (J. Rehm, D. Baliunas, S. Brochu, B. Fischer, W. Gnam, J. Patra, S. Popova, A. Sarnocinska-Hart and B. Taylor in collaboration with E. Adlaf, M. Recel and E. Single), *The costs of Substance Abuse in Canada 2002*, March 2006; A. Garcia-Altes, J. Ma Olle, F. Antonanzas and J. Colom, "The social cost of illegal drug consumption in Spain," *Addiction*, No. 97, pp. 1145-1153, Society for the Study of Addiction to Alcohol and Other Drugs, 2002; P. Kopp, P. Fonoglio and V. Parel, "Le coût social de l'alcool, du tabac et des drogues illicites en 2000", *adsp* ('Acualité et dossier en santé publique'), No. 55, June 2006; Inter-

Tübingen, 1995.

[114] E. Robson Single, L., X. Xie,, J Rehm,. The Economic Costs of Alcohol, Tobacco, and Illicit Drugs in Canada, 1992, Addiction 93: 983-998.

[115] CCSA-CCLAT (J. Rehm, D. Baliunas, S. Brochu, B. Fischer, W. Gnam, J. Patra, S. Popova, A. Sarnocinska-Hart, B. Taylor In collaboration with E. Adlaf, M. Recel, E. Single), *The costs of Substance Abuse in Canada 2002*, March 2006

[116] Observatoire francais des drogues et des toxicomanies (Pierre Kopp and Philippe Fenoglio), » Le coût social des drogues licites (alcool et tabac) et illicites en France », OFDT, Étude No. 22, Paris 2000.

[117] Anna Garcia-Altes, Josep Ma Olle, Fernando Antonanzas and Joan Colom, "The social cost of illegal drug consumption in Spain", *Addiction, No. 97, pp. 1145-1153, Society for the Study of Addiction to Alcohol and Other Drugs, 2002.* http://onlinelibrary.wiley.com/doi/10.1046/j.1360-0443.2002.00170.x/pdf

[118] The Inter-American Drug Abuse Control Commission's Program to Estimate the Social and Economic Costs of Drugs in the Americas (Cost Program), *A Summary of Results from the Pilot Study in Six Countries in Latin America and the Caribbean*, Washington 2007 (http://www.issdp.org/conferences/oslo2007/Marya_L.pdf).

American Drug Abuse Control Commission, Program to Estimate the Social and Economic Costs of Drugs in the Americas, "A summary of Results from the Pilot Study in Six countries in Latin America and the Caribbean", Washington 2007.

Though direct comparability – for data and methodological reasons - of the various estimates may be limited,[119] they still provide some ideas of the likely orders of magnitude of such costs, ranging from 0.1% to 1.7% of GDP. The unweighted average of these estimates amounts to some 0.7% of GDP. If this proportion were applied to global GDP, the economic costs related to drug abuse would have amounted to some US$400 bn at the global level in 2009. This seems to be a rather conservative estimate. If the national proportions of the twelve countries for which data is available were applied to the respective national GDP in 2009, the resulting total economic costs related to drug abuse would reach almost US$320 bn, equivalent to 1.2% of the GDP in these twelve countries. Global economic costs is expected to be substantially higher than the total in the twelve countries. Applying a proportion of 1.2% to the global GDP (based on World Bank data from 176 countries)[120] yields a figure close to US$700 billion. This is likely to be an upper-end estimate. Most of the countries for which no data is available are developing countries and most of them are likely to have low economic costs of drug abuse,[121] though there are, of course, also a number of exceptions (notably transit countries and countries close to drug producers). Against this background, it seems likely that global economic costs related to drug abuse lie somewhere between US$400 billion and 700 billion per year. The actual figures are probably closer to the lower end of this range. Assuming that the missing industrialized countries had economic costs related to drug abuse of around 0.9% of GDP (unweighted average of the seven industrialized countries for which data is available[122]) and that the missing developing countries had costs of around 0.3% of GDP (unweighted average of the four developing countries), the global economic costs of drug abuse could amount to some US$460 billion, which is at the lower end of the above-mentioned range (US$400 bn to US$700 bn). This is equivalent to some 0.8% of global GDP in 2009 (range: 0.7% to 1.2%).

The calculations of the 'economic costs of drug abuse' have been based – in most cases - on a 'cost of illness' (COI) approach[123] and do not include a number of crime-related costs linked to drug abuse. Drug related robberies, burglaries or larceny (stealing of goods) to purchase drugs are – according to this concept - simple transfers in ownership that do not affect overall GDP (except for damages caused in the process). Therefore, they have not been considered in these calculations (except for the calculations done for the UK).

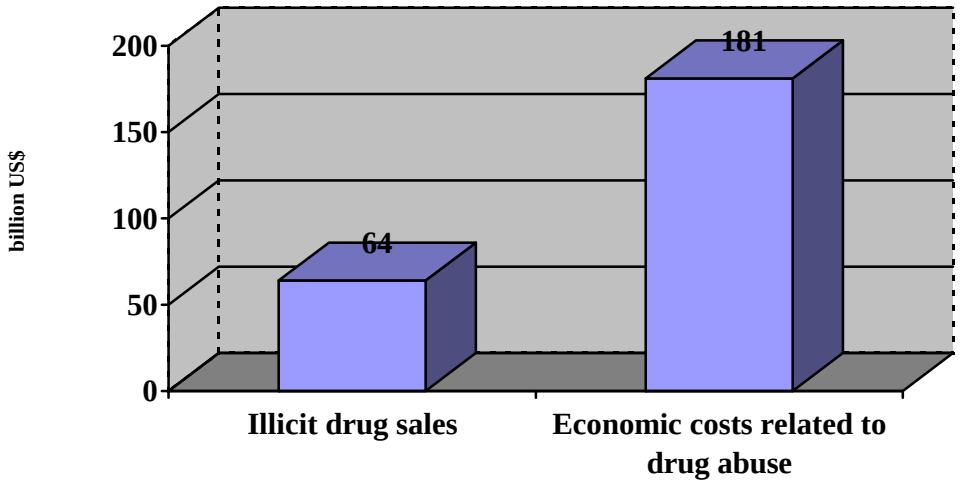
Though this is correct from a purely methodological point of view, the application of the COI approach falls short of what the general public would associate with 'drug-related costs'. Assuming for the USA, for instance, that around a fifth[124] of the total illicit drug purchases

[119] A recent evaluation on studies estimating the economic cost of drug abuse by RAND concluded: "It is not possible to simply draw on the independent efforts being undertaken within particular nations, as such efforts – while significant and highly valuable to the nations conducting them - will not reflect the need for conformity in measurement that is necessary to enable cross-country comparisons. Thus, the ability to systematically compare the cost of drug use across nations may remain out of our reach for a few more decades." RAND, Issues *in estimating the economic cost of drug abuse in consuming nations*, Report 3, prepared for the European Commission , 2009, Santa Monica, California, USA.
[120] World Bank, *World Development Indicators* 2010.
[121] This can be deduced from still lower prevalence rates of drug abuse as well lower opportunity costs as per capita income of persons working in developing countries is much lower than in developed countries.
[122] 'England and Wales' and 'Scotland' were considered to be one country (United Kingdom).
[123] Canadian Centre on Substance Abuse (CCSA), *International Guidelines for Estimating the Costs of Substance Abuse*, 2001.
[124] This would be equivalent to the proportion of people in state prisons reporting to have financed their drug habit out of various criminal activities.

(total: US$64 bn)[125] were financed out of criminal activities and that stolen goods often can only be sold by drug addicts at prices far below the prevailing market prices, the overall costs related to drug abuse would rise from more than US$180 bn in 2002 to more than US$200 billion. Total costs related to drug abuse – which is linked to the financial flows emerging from transnational organized crime - may thus have amounted to some 2% of GDP in the USA in 2002. This would still be a conservative estimate. Calculations for Scotland suggest that taking 'wider costs to society' into account (i.e. all crime-related costs and emotional costs linked to the pain suffered by family members due to the death of drug using children, partners or parents), the socio-economic estimates may double.

Even using the lower published figure of US$181 bn for the USA - which excludes the acquisitive crime-related costs - and comparing this figure with the overall amounts spent by drug users for the purchase of their illicit substances (around US$64 billion, of which US$35 bn spent on cocaine and US$10 bn on heroin),[126] data indicate that the economic costs prompted by drug abuse were around 3 times as high as the drug-related sales figures, or 3 times the gross drug-related profits of organized crime (as just 1% of the drug sales actually goes to farmers in the Andean region or Afghanistan). The data also suggest that the 'benefits' generated for organized crime by the drug trade are, in fact, far smaller than the drug-related 'economic costs' which have to be largely borne by the general public. The 'net results' of the drug business are thus clearly negative.

Figure 10: Illicit drug sales (2000) and economic costs related to drug abuse (2002) in the USA

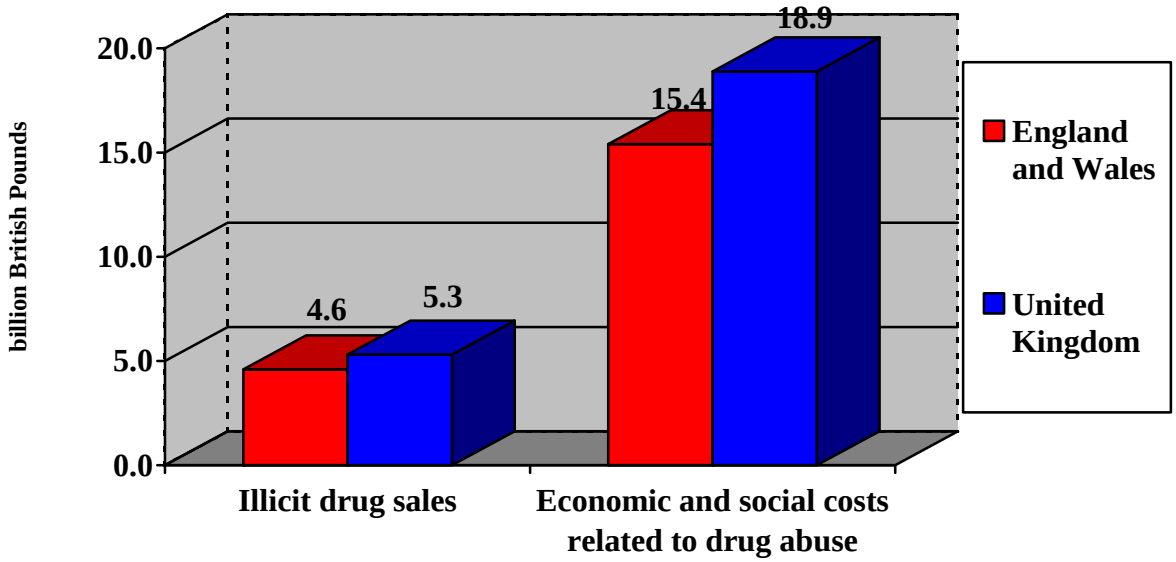


Sources: Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004 and ONDCP, *What America's Users Spend on Illegal Drugs*, December 2001.

Estimates for the UK show similar patterns. Estimates suggest that the economic and social costs related to drug abuse (which include costs related to acquisitive crime) are 3½ times larger than the illicit drug retail sales, again indicating that the 'profits' generated by organized crime are far lower than the costs generated for the public at large.

[125] ONDCP, *What America's Users Spend on Illegal Drugs*, December 2001, p. 3.
[126] ONDCP, *What America's Users Spend on Illegal Drugs*, December 2001, p. 3.

Figure 11: Illicit drug sales (2003/2004) in the United Kingdom and economic and social costs related to drug abuse - based on estimates for England & Wales (2003/2004) and Scotland (2006) in billion £



Sources: S. Pudney, C. Badillo, M. Bryan, J. Burton, G. Conti and M. Iacovou , *Estimating the size of the UK illicit drug market*, Institute for Social and Economic Research, University of Essex; L. Gordon, L. Tinsley, C. Godfrey and S. Parrot,“ The economic and social costs of Class A drug use in England and Wales, 2003/04” in Home Office, *Measuring different aspects of problem drug use: methodological developments*, Home Office Online Report 16/06, London 2006; J. Case, G. Hay, C. Godfrey and S. Parrott, *Assessing the Scale and Impact of Illicit Drug Markets in Scotland*, Glasgow, October 2009.

Most of the economic costs in the USA related to drug abuse – based on the COI approach - were due to productivity losses (US$129 bn in 2002 or 71% of the total), mainly resulting from the inability of drug users to work productively during their times of incarceration, due either to their careers as drug dealers and criminals, drug abuse-related illnesses or premature death. Health care costs accounted for around US$16 bn or 9% of the total, mostly related to treatment demand. Most of the remaining costs were related to incarceration costs (9%), police work (5%) and other drug supply control efforts (3%). These costs would not have been incurred if criminal groups had not supplied the general public with drugs in the first place.

Expressed in constant 2002 dollars, the drug abuse-related costs based on the cost of illness approach rose from US$138 bn in 1992 to US$181 bn in 2002; a real rise of 31% over that period.[127] This rise is remarkable as the purely drug-related expenditures for drug users declined from US$88 bn in 1992 to US$64 bn in 2000 (in constant 2000 US dollars), equivalent to a decline of 27%,[128] with no significant changes reported over the subsequent two years. In other words, a decline in the overall drug sales figures - and thus in the drug related financial flows for organized crime - went hand in hand with rapidly growing drug abuse related costs in the USA. This shows that drug abuse, once established, tends to develop dynamics of its own.

[127] Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004, p. 64.
[128] ONDCP, *What America’s Users Spend on Illegal Drugs*, December 2001, p. 3.

Total costs related to drug abuse in the USA in billion US$ (2002)

	in billion US$ (2002)		in % of all drug related costs		in % of GDP
PRODUCTIVITY LOSSES					
Premature death	24.6		13.6%		
Drug abuse-related illness	33.5		18.5%		
Institutionalization/hospitalization	2.0		1.1%		
Productivity loss of victims of crime	1.8		1.0%		
Incarceration	39.1		21.6%		
Crime careers	27.6		15.3%		
Subtotal		128.6		71%	1.2%
HEALTH COST					
Treatment, ambulatory care and special disease cost	8.6		4.8%		
HIV/AIDS	3.8		2.1%		
Prevention	1.4		0.7%		
Research	1.0		0.5%		
Other (insurance administration, training, crime victim health care cost)	1.2		0.6%		
Subtotal		15.8		9%	0.2%
OTHER COSTS					
State and local police protection	9.8		5.4%		
State and local legal adjudication	2.3		1.3%		
Federal, state and local corrections	16.9		9.4%		
Federal spending to reduce supply	6.2		3.4%		
Private legal defence	0.6		0.4%		
Property damage for victims	0.2		0.1%		
Social welfare	0.2		0.1%		
Subtotal		36.4		20%	0.3%
TOTAL DRUG-RELATED COSTS		**180.9**	**100.0%**	**100.0%**	**1.7%**

Source: Office of National Drug Control Policy (ONDCP), *The Economic Costs of Drug Abuse in the United States, 1992-2002*, Washington D.C., December 2004.

Economic and social cost calculations of drug abuse (class A drugs) for England and Wales (total: £15.4 bn or US$26.1 bn in the financial year 2003/2004) – based on a different approach – also reveal a different breakdown. According to these calculations, 90% of the drug-related cost are crime-related, 6% are related to drug death and only 3% are health-related. Drug consumption-related activities prompting acquisitive crime, notably fraud, burglary, robbery and shop-lifting, account for the bulk of the drug-related economic cost (86.5% of the total). 'Problematic drug users' ('drug addicts') were responsible for 99% of the total drug use-related cost though they only account for a small proportion of the total number of drug users.

Economic and social costs of Class A drug use in England and Wales (2003/2004)

	million British pounds	million US$	in % of total economic cost		in % of GDP
DRUG-RELATED CRIME					
Fraud	4,866	8,239	31.6%		
Burglary	4,070	6,892	26.4%		
Robbery	2,467	4,177	16.0%		
Shoplifting	1,917	3,246	12.4%		
Drug arrests	535	906	3.5%		
Subtotal	13,855	23,460		90.0%	1.6%
DRUG-RELATED DEATHS	923	1,563		6.0%	0.1%
DRUG-RELATED HEALTH COST					
Inpatient care	198	335	1.3%		
Inpatient mental health	88	149	0.6%		
Accident and emergency (A&E)	81	137	0.5%		
Community mental health	61	103	0.4%		
Primary care GP visits	32	54	0.2%		
Neonatal effects	3	5	0.0%		
Infectious diseases	25	42	0.2%		
Subtotal	488	826		3.2%	0.1%
DRUG-RELATED SOCIAL CARE	69	117		0.4%	0.0%
Other	65	110		0.4%	0.0%
TOTAL	15,400	26,076		100.0%	1.8%

Sources: L. Gordon, L. Tinsley, C. Godfrey and S. Parrot,“ The economic and social costs of Class A drug use in England and Wales, 2003/04” in Home Office, *Measuring different aspects of problem drug use: methodological developments,* Home Office Online Report 16/06, London 2006.

… and problems of drug trafficking-related violence

An even bigger problem than the large cost of acquisitive crime – notably for many drug producing and -transit countries - has been the emergence of organized crime groups that use lethal violence as a tool to defend or increase their market shares. In fact drug trafficking goes hand in hand with illegal gun-carrying in many countries. The increased presence of guns also enhances a culture of violence among gangs – or against the authorities, which has an impact on members of the local community who have to live with the enhanced threat of violence.[129] This happened – inter alia – in Colombia in the 1980s and the early 1990s when the main drug cartel of that country tried to infiltrate the political system and attempted to impose its will on to the rest of society. As a consequence, the number of homicides reported in Colombia rose from some 22 per 100,000 inhabitants in 1970 and 33 per 100,000 in 1980 to 86 per 100,000

[129] RDO, Mexican Homicides Database, 2011.

in 1992 (close to 30,000 people) before gradually falling to 36 persons per 100,000 inhabitants by 2008 as the Government re-established its authority against organized crime.[130] Similarly, the Mexican drug cartels responded with ever more violence to attempts by the federal authorities to counter their activities. Thus, the number of homicides in Mexico rose from some 2,800 cases in 2007 to more than 15,200 cases in 2010, or more than 30,000 homicides since the beginning of the Government's decision in late 2006 to actively confront the operations of the drug cartels.[131] Drug-related violence is also a serious challenge in Brazil. Almost 30,000 homicides were reported annually in the new millennium, with a high proportion linked to illicit drug trafficking.[132] Even larger numbers of people have been losing their lives in the hostilities in Afghanistan which are – to some extent – financed by the Taliban from the opium and heroin trade from Afghanistan to neighbouring countries.

… and corruption

Available data show that there is a correlation between drug trafficking and corruption, or, more generally speaking, weak 'rule of law'. The most successful criminal organizations are usually those that are able to make use of corruption (supported by violence and systematic intimidation) to weaken official controls and law enforcement. That is why cities, countries or other geographical areas exposed to intense drug trafficking activities often have a high incidence of corruption (and violence). In some instances, criminal organizations also manage to buy the protection of public officials so that they can undermine the activities of competing criminal organizations and establish a near-monopoly over illicit drug markets.[133]

Thus, the main drug producing countries are also confronted with high levels of corruption, notably the two main opium producing countries, Afghanistan and Myanmar, ranking 176 out of 178 countries assessed in 2010 according to Transparency International.

In general, the countries surrounding the drug producing countries also suffer from relatively high levels of corruption, and the same applies to several drug transit countries.

Thus, the very mechanisms to reduce the illicit drug trade can be hindered or neutralized by corruption. In some countries, drug-related corruption has even been detected among high-level officials, including heads of drug law enforcement agencies. Corruption also helped the internationally operating drug cartels to grow and operate effectively out of Mexico, increasingly challenging the state's authority. Against this background, the Government of Mexico launched 'Operation Clean-up' in 2008, aimed at purging the top ranks of the police of drug cartel influence. This resulted in the arrests and convictions of both the interim commissioner of the federal police and the acting head of the division of drug control operations.[134]

[130] UNODC, The Globalization of Crime, *A Transnational Organized Crime Threat Assessment*, June 2010.
[131] RDO, Mexican Homicides Database, 2011.
[132] International Narcotics Control Board (INCB*), Report of the International Narcotics Control Board for 2003*, Chapter I: Drugs, Crime and Violence: the Microlevel Impact, pp. 1–11.
[133] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2010, United Nations publication, Sales No. E.11.XI.1, ISBN: 978-92-1-148258-4, ISSN: 0257-3717 New York 2011, p 3.
[134] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2010, United Nations publication, Sales No. E.11.XI.1, ISBN: 978-92-1-148258-4, ISSN: 0257-3717 New York 2011, p 4.

… with less of a danger posed by financial flows emanating from smuggling of migrants and trafficking in persons

The financial flows generated out of smuggling of migrants or trafficking in persons are - at the global level - estimated to be substantially lower than the financial flows generated out of illicit drug trafficking. Past estimates suggested that there could be, in economic terms, a 10:1 ratio in terms of the importance of drug trafficking (more than US$320 bn)[135] versus trafficking in human beings (some US$32 bn).[136]

Moreover, the socio-economic impact is less clear when it comes to smuggling of migrants or trafficking in persons. The maintenance of smuggling networks is clearly negative. There are ongoing reports of violence suffered by victims of smuggling or trafficking activities. There are also reports of corruption linked to such activities. Nonetheless, the violence and corruption created by such activities are still more localized and overall less severe for the societies concerned than what is true for drug trafficking. The victims of violence are, in general, the persons trafficked or smuggled and corruption tends to be limited to lower-level police and customs officers, but in general it does not reach higher levels in the enforcement apparatus.

The countries of origin are, of course, losing human resources due to smuggling or trafficking, which can result in a 'brain drain,' thus reducing the economic prospects of the countries concerned.[137] However, such human resources are often under-employed in the countries of origin. In fact, the main underlying problem leading to smuggling and trafficking in persons are the poor socio-economic prospects for large sections of the population in many developing countries. If the political and living conditions could be improved in the countries concerned and the mid-term prospects were to become reasonably good, the problem of smuggling and trafficking in persons would gradually fade away. From a purely economic perspective, the smuggled migrants or the trafficked persons may – even in cases of clear exploitation (sexual exploitation or forced labour) - generate larger financial incomes in their destination countries than in their countries of origin. This will enable victims to assist their relatives in their countries of origin, thus raising private consumption and, to a lesser extent, private investment there.

The actual amounts transferred from migrant workers (irrespective of their legal status) to their home countries are, in fact, substantial. World Bank data for 2008 show such workers' remittances to low and middle income countries of US$243 bn, equivalent to 1.5% of the GDP of these countries. In comparison, the income from official development assistance for low income and middle income countries amounts to just 0.8% of GDP. For low income countries, the importance of workers' remittances rises to 6.8% of GDP, on average. The largest workers' remittances in 2009 went to India (US$48.6 bn), followed by Mexico (US$21.2 bn), Nigeria (US$18.2 bn), the Philippines (US$15.1 bn), China (US$13.7 bn), Bangladesh (US$10.5 bn), Pakistan (US$8.7 bn) and Egypt (US$7.1 bn). Data for 2009 show that "workers' remittances and compensation of employees" amounted to, on average, 6.6% of GDP for low income countries (or 6.4% of GDP for the least developed countries). This

[135] UNODC, *2005 World Drug Report*, Volume 1: Analysis, Chapter: 2: Estimating the value of illicit drug markets), Vienna 2005, pp. 123 – 143.
[136] Patrick Belser, *Forced Labor and Human Trafficking: Estimating the Profits*, International Labour Organization/Cornell University, Working Paper 42, March 2005, p. 17.
[137] Michel Beine, Fréderic Docquier, Hillel Rapoport, "Brain Drain and Human Capital Formation in Developing Countries: Winners and Losers" , *The Economic Journal*, Vol. 118, Issue 525, April 2008, pp. 631-652.

compares with a global average of just 0.8% of GDP. For individual countries, the importance of workers' remittances for the local economy may be substantially higher, for instance, for Tajikistan (35.1% of GDP in 2009), Moldova (22.4%), Philippines (12.2%), and Senegal (10.6%).[138] The large majority of these remittances are from migrant workers who have acquired legal status in the recipient countries and have lived and worked there for many years - though some of the remittances also come from persons who have been smuggled or trafficked to the respective recipient countries.

The 'advantages' for the countries receiving illegal migrants are mixed. In contrast to legal immigration, where recipient countries can match vacancies with needed skills and integration can take place, illegal immigration can disturb the labour market and the overall social fabric and can lead to unfair competition. Some companies in the recipient countries will benefit from such unfair competition while others – generally those playing by the rules – will lose. In the end, this may be to the detriment of the local population, including legal immigrants. While smuggled people working below minimum wages may increase the profits and/or the competitiveness of those individuals or companies exploiting them, most industrialized countries already suffer from unemployment. The cost of unemployment has to be borne by the general public. Unemployment insurance funds are fed by both employees and employers in many countries. Increasing unemployment means having to increase such contributions, which in turn may reduce the competitiveness of companies. This can lead to further cuts in the workforce. Other problems are linked to the increasing difficulties faced by illegal immigrants to access the legal economy[139] which may prompt them to look for income opportunities in the various illicit sectors. An increase of illegal immigration, notably if taking place in parallel with rising levels of unemployment and crime associated with foreigners, may contribute to or strengthen existing xenophobia and racism[140] and potentially lead to social unrest, with immigrants and asylum seekers often being the first victims[141].

Sexual exploitation – which accounts for the bulk of the persons trafficked - constitutes primarily a problem for the persons concerned. Violence is mostly used against the victims of such exploitation, to make them submissive. Sexual exploitation may also entail a health problem, as well as a moral problem, for society at large. Some of the victims, who often operate without protection and control by the authorities, are forced to engage in unprotected sex practices, thus raising the risks of being infected with HIV and other sexually transmitted diseases. This may force other sex workers to follow this example in order to stay in business. It may also help explain, partly, why – at times when the trafficking of persons into the EU increased, the overall numbers of new HIV infections in the EU-27 countries also increased, from 13,800 new infections in 2000 to 26,000 new infections in 2009 (5.8 per 100,000

[138] World Bank, *World Development Indicators 2010* ,Washington 2010.

[139] C. Fijnaut and L. Paoli, *Organised crime in Europe: concepts, patterns, and control policies in the European Union and Beyond*, Springer, Dordrecht, the Netherlands, 2004, p. 613

[140] In fact, there are indications that an increase in illegal immigration went hand in hand with an increase of xenophobia in Europe in recent years (A. Kohut and R. Wike, Xenophobia on the Continent, *The National Interest*, November-December 2008; (http://fra.europa.eu/fraWebsite/attachments/AR_2010-conf-edition_en.pdf), V. Pop, "Economic crisis fuelling racism in Europe, report warns" *EUObserver*, 27.5.2010. http://euobserver.com/9/30149.

[141] The European Union Agency for Fundamental Rights reported that in 9 of the 12 Member States that collected criminal justice data on racist crime experienced an upward trend in recorded racist crime over the 2007-2008 period. Overall recorded racist crime cases clearly increased in the twelve EU countries, for which data is available, over the 2000-2008 period, with increases reported in 11 out of 12 countries. Rather high proportions of Roma (10%) and Africans (9%) from both North Africa and Sub-Saharan Africa reported to have been assaulted or threatened over the past twelve months in Europe – a far higher proportion than people from the respective majority populations. (European Union Agency for Fundamental Rights, *Annual Report 2010*, Vienna 2010.)

people).[142] Data show that the increases were linked to sharply increasing homo- and heterosexual infections over the 2000-2009 period while new infections from injecting drug use showed a decline.[143] Even if trafficking victims try to escape exploitation, they may still find it difficult to find a job where they earn a decent income and are treated with respect. Their previous jobs in combination with traditional moral attitudes often makes it difficult for them to return to their countries of origin. The large potential profit for traffickers keeps this business going and expanding, and some initial victims have become themselves engaged in trafficking in persons activities later.

… and financial flows emanating from the smuggling of counterfeit medicines

The huge funds to be generated out of smuggling activities also fuel the counterfeit medicines business. If the frequently quoted (including by the World Health Organization, WHO)[144] estimate of a global market for counterfeit medicines of some US$75 bn for 2010[145] were correct, the size of these activities – in economic terms – would be more than twice as large as the income generated from trafficking in persons[146] and equivalent to almost a quarter of global illicit drug sales.[147] The size of the global counterfeit medicine market would then have amounted to some 9% of the global pharmaceutical market in 2010.[148]

As the WHO highlights, counterfeit medicines are nowadays found everywhere in the world.[149] Nonetheless, some geographic concentrations can be identified. The analysis of incidents (more than 2,000 cases in 2009) of identified counterfeit medicines suggest that 43% of incidents occurred in Asia, followed by Latin America (28%).[150] The number of reported incidents more than doubled between 2004 and 2009.[151]

According to previous WHO estimates, the counterfeit medicines market ranges from around 1% of sales in the developed countries to more than 10% in developing countries. Many countries in Africa and parts of Asia and Latin America have areas where more than 30% of the medicines on sale are counterfeit. Overall, a reasonable range for developing countries – according to WHO - is between 10% and 30%. Many of the former Soviet republics have a proportion of counterfeit medicines which is above 20% of market value. Medicines

[142] European Centre for Disease Prevention and Control and World Health Organization, *Surveillance Report HIV/AIDS surveillance in Europe 2009*, ISBN 978-92-9193-228-3, Stockholm 2010.
[143] European Centre for the Epidemiological Monitoring of AIDS (WHO and UNAIDS Collaborating Centre on AIDS), HIV/AIDS Surveillance in Europe, EuroHIV Surveillance in Europe, End-year report 2003, 2004, No. 70 and European Centre for Disease Prevention and Control and World Health Organization, *Surveillance Report HIV/AIDS surveillance in Europe 2009*, ISBN 978-92-9193-228-3, Stockholm 2010.
[144] World Health Organisation, *Fact Sheet, Counterfeit medicines*, Fact sheet No. 275, revised November 2006. http://web.archive.org/web/20080724031944/http://www.who.int/mediacentre/factsheets/fs275/en/
[145] Up from US$35 bn in 2004. Pacific Research Institute (PRI) and Center for Medicines in the Public Interest (CMPI), *21st Century Health Care Terrorism: The Perils of International Drug Counterfeiting*. Sept. 2005.
[146] United Nations Interregional Crime and Justice Research Institute, Emerging Crimes – Trafficking in Human Beings, http://www.unicri.it/emerging_crimes/human_trafficking/
[147] UNODC, *2005 World Drug Report*, Volume 1: Analysis, Chapter: 2: Estimating the value of illicit drug markets), Vienna 2005, pp. 123 – 143.
[148] " IMS Health Forecasts Global Pharmaceutical Market Growth of 5-7 Percent in 2011, Reaching $880 Billion", WorldPharmaNews, 20 December 2010.
[149] World Health Organisation, *Fact Sheet, Counterfeit medicines*, Fact sheet No. 275, revised January 2010, http://www.who.int/mediacentre/factsheets/fs275/en/index.html
[150] Pharmaceutical Security Institute – Counterfeit Situation – Geographic Distribution, http://www.psi-inc.org/counterfeitSituation.cfm
[151] Pharmaceutical Security Institute – Counterfeit Situation – Incident Trends, http://www.psi-inc.org/incidentTrends.cfm

purchased over the Internet from sites that conceal their physical address were found to sell counterfeits in over 50% of the cases,[152] and such Internet sales are rapidly increasing.

The socio-economic impact of these revenues appears to be, at first sight, less problematic for society at large than the illicit drug-related trafficking income. Violence related to counterfeit medicine smuggling is not significant and the same applies to corruption at high levels. The ability of such activities to contribute to a weakening of the state is also limited. The problems are mainly concentrated in the area of public health.

The socio-economic impact of counterfeit medicine smuggling is linked to losses (or foregone profits) suffered by legal pharmaceutical companies. As many of these companies tend to be large and rich, the general understanding of the risks associated with such smuggling is often limited. This does not mean, however, that such activities are risk-free. Once the amounts of counterfeit medicines found on the market exceed certain thresholds, there is a risk that heavy investment into research for new medicaments will not be profitable anymore. Then, humanity as a whole could suffer from counterfeit medicines. This is partly true already today as priority is often not given to research medicaments needed in developing countries. This is due to the lack of reasonable expectations of economic profits, and to the widespread smuggling of counterfeit medicines in these countries.

More immediate dangers are linked to the substandard quality of some of the counterfeit medicaments, as highlighted by the WHO. This has immediate negative health impacts on the persons using such medicines, affecting ever larger sections of the population in developing countries of Africa, Asia and partly also the Americas. It could be argued that many ordinary people in some of these countries could not afford to purchase legal medicines, given their low levels of purchasing power and the lack of properly working social security systems. Low levels of active ingredients may be better than no medicaments at all. However, this is not necessarily true. Diluted and mixed counterfeit medicines can be harmful and dangerous. The ingredients range from inactive, ineffective preparations to random mixtures of harmful toxic substances. Counterfeit medicines can result in treatment failure or even death. Eliminating them is a considerable public health challenge.[153]

Moreover, there are indications that poor quality medicaments, notably in the area of antibiotics, may assist in the development of antibiotics-resistant bacteria, endangering the lives of millions of people who are no longer protected from serious diseases. The WHO also warns that counterfeit medicines containing insufficient active ingredients contribute to increased resistance in the case of antimalarials, which may lead to large numbers of deaths. Half of the world's population is considered at risk from malaria, mainly in developing countries. Each year, there are almost 250 million cases, causing 860,000 deaths. Approximately 85% of these deaths are among children, and most of them occur in Africa.[154] A WHO study in seven African countries found that between 20% and 90% of anti-malarials (often counterfeit medicines) failed basic quality tests.[155] The emergence of antimicrobial resistance due to inappropriate or irrational use of antimicrobial medicines, prompted – inter

[152] World Health Organization, *Fact Sheet, Counterfeit medicines,* Fact sheet No. 275, revised November 2006. http://web.archive.org/web/20080724031944/http://www.who.int/mediacentre/factsheets/fs275/en/
[153] World Health Organization, *Fact Sheet, Counterfeit medicines,* Fact sheet No. 275, revised January 2010, http://www.who.int/mediacentre/factsheets/fs275/en/index.html
[154] World Health Organization, *WHO releases new malaria guidelines for treatment and procurement of medicines,* http://www.who.int/mediacentre/news/releases/2010/malaria_20100308/en/
[155] World Health Organization quoted in Sanofi-Aventis, *Drug Counterfeiting,* http://ec.europa.eu/internal_market/indprop/docs/conf2008/wilfried_roge_en.pdf

alia - by counterfeit medicines, may also be problematic. About 440,000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually, causing at least 150,000 deaths worldwide. Extensively drug-resistant tuberculosis (XDR-TB) has been reported in 64 countries to date.[156]

b) Implications of investment of criminal financial flows in the licit sector

The most negative impact of criminal financial flows from the activities of transnational organized crime stems from their capacity to perpetuate and expand criminal ventures by financing them. However, even when such funds enter the licit economy, they remain potentially problematic. Given the overall size of these criminal funds – with estimates now around US$2 trillion (see chapter on 'previous results') – their socio-economic impact is significant, notably for some of the smaller countries in the developing world.

Some of the main socio-economic effects of such criminal financial flows, as discussed in the literature,[157] include:

- Distortions in the resource allocation from high-yielding investments to investments that run a low risk of detection;
- Distortions of prices, notably in the real estate sector;
- Distortions of consumption and impact on imports;
- Distortion of exports and potential problems with investment and economic growth;
- Unfair competition; risks of crowding out licit activities and negative impact on direct foreign investment;
- Corruption;
- Risks of real sector volatility;
- Strengthening of skewed income and wealth distributions;
- Distortion of economic statistics and thus potential errors in economic policy decision- making
- Undermining the credibility of legal institutions

Distortions in the resource allocation

One of the clearest differences between investment based on licit sources and investment based on criminal funds affects the decision-making parameters of how to invest these funds. While a 'normal investor' will direct his or her investment into a venture that will yield the highest possible return based on his or her willingness to take economic risks, the predominant consideration for an investor of criminal funds is to obtain the strongest possible guarantee that the criminal origin of the investment will not be detected. This leads to

[156] World Health Organization, *Antimicrobial resistance, Fact sheet No. 194*, February 2011, http://www.who.int/mediacentre/factsheets/fs194/en/index.html

[157] Detailed elaborations of such impacts, as found in the scientific literature, can be found in United Nations International Drug Control Programme (UNDCP), "Economic and Social Consequences of Drug Abuse and Illicit Trafficking", *UNDCP Technical Serices*, Vienna 2007, No. 6; International Narcotics Control Board (INCB), *Report of the International Narcotics control Board for 2002*, Sales No. E.03.XI.1, New York 2002, Chapter 1 (Illicit drugs and economic development), pp. 1 – 10; B. Unger, *The Scale and Impacts of Money Laundering*, pp. 109-182, in D. Masciandaro, E. Takáts and B. Unger, *Black Finance: The Economics of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007.

investment decisions that focus on concealment, while accepting low rates of return.[158] A sub-optimal resource allocation is the consequence. Criminal funds thus have a negative impact on economic growth by diverting resources to less productive activities.[159]

In other words, money will be directed away from sound investments towards low quality ones, which in the end will generate relatively little future-oriented economic activity. Criminal finance encourages investment in non-productive sectors.[160] Thus criminals often invest their criminal proceeds in real estate, as well as in sectors that are familiar to them such as bars, restaurants, prostitution, cars and transport companies.[161] This has also been confirmed in a study on organized crime in Europe (2004)[162]. However, the statement that organized crime groups are ready to accept low rates of return has to be qualified. By investing in hotels, restaurants, night clubs and so on, the organized crime groups often create an infrastructure for other illegal activities, such as installing illegal slot machines or selling drugs. Similarly, investment in transport companies helps them to infiltrate this sector and plays a key role in the transportation of drugs by sea, air and road.[163]

A study in the Netherlands (1999) revealed that around 80% of the criminal income was 'invested'; 57% of the total went into 'conventional investment' (real estate, banking, securities) and 23% was directly invested into various business activities, mostly 'coffee shops' (where cannabis is sold), shops, hotels and brothels. The data also confirmed that the higher the criminal income, the lower the proportion used for consumption, and the higher the proportion of the criminal funds going into investment. More than half of the criminal funds used for 'conventional investment' were invested into real estate and more than 40% into fixed interest-bearing assets,[164] thus underlining the rather conservative investment strategies of criminals in the licit sector. Similarly, the cartels in Colombia in the 1990s were reported to have concentrated their investments in real estate and in the construction sector. Once the construction boom drew to a close, the city of Medellín suffered an economic decline and high unemployment because little alternative productive investment had been made, however.[165] In West Africa, in recent years, significant amounts of criminal money seems to have been invested in the construction of casinos. Recent examples of arms and drug dealers in some of the western Balkan countries revealed major investments in large-scale construction, ranging from apartment houses, shopping malls and business centres to yacht ports, officially financed by foreign banks, though with criminal funds – parked in offshore

[158] B..L. Bartlett , "The negative effects of money laundering on economic development", *Platypus Magazine* (77), 2002, pp. 18-23.
[159] World Bank, *Reference Guide to Anti-Money Laundering and Combating the Financing of Terrorism*, Washington 2006, p. II-8.
[160] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 5.
[161] E.R. Kleemans, M.E.I. Brienen and H.G. van de Bunt (eds) (2002), *Georganiseerde criminaliteit in Nederland, tweede rapportage op basis van de WODC– monitor*, Ministerie van Justitie, Wetenschappelijk Onderzoek- en Documentatiecentrum, quoted in Brigittte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 109-182.
[162] C. Fijnaut and L. Paoli, *Organised crime in Europe: concepts, patterns, and control policies in the European Union and Beyond* Springer, Dordrecht, the Netherlands, 2004.
[163] C. Fijnaut and L. Paoli, *Organised crime in Europe: concepts, patterns, and control policies in the European Union and Beyond* Springer, Dordrecht, the Netherlands, 2004.
[164] J. R. Meloen, H. Landman, J de Miranda,.van Eekelen and S. van Soest, "Buit en Besteding, Een empirisch onderzoek naar de omvang, de kenmerken en de besteding van misdaadgeld," Den Haag: Reed Business Information, 2003, quoted in Brigittte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 124-126.
[165] L. Tullis, "Illegal drugs in nine countries-socioeconomic and political consequences", report prepared for UNRISD and the United Nations University, published as *Unintended Consequences; Illegal Drugs and Drug Policies in Nine Countries*, Boulder, Colorado, USA, Lynne Rienner, 1995, p. 145.

centres - serving as the guarantee for repayment of the loans.[166] Reports from countries such as Canada or the United States, where significant parts of the receipts of illicit drug trafficking and from other organized crime activities are reinvested, indicate that drug money is often channeled to small, cash rich businesses which have no need to issue large numbers of official invoices.[167] In the Caribbean (and a number of other regions), reports – going back more than a decade - suggest that organized crime groups even funded or bought whole banks in order to facilitate money-laundering activities.[168]

Distortions of prices

One problem, frequently highlighted in the scientific literature, is the tendency of illicit money flows to distort market prices. This seems to be particularly pronounced in the real estate sector. This sector is very attractive for investment because it tends to be non-transparent, that is, the 'objective value' is difficult to asses (which helps in the money-laundering process) and – at the same time – it is considered a rather 'safe investment'.[169] In a 1999 Dutch study on the spending patterns of criminals, data showed, for instance, that in 56% of all criminal cases, the persons or groups involved invested some of their criminal proceeds into immovable property, ranging from apartments to villas.[170]

The basic underlying problem – from an economic point of view - is that the large sums of criminal proceeds tend to be concentrated among a limited number of organized crime groups which then invest these funds in a limited number of economic sectors, notably in real estate. This can lead to massive increases in real estate prices, thus pricing people who rely on legal sources out of the market.

Distortions of consumption patterns and impact on imports

Another problem of criminal funds are related to the differences in consumption patterns of persons relying on licit income versus those relying on illicit income. Criminal finance encourages conspicuous consumption (expensive cars, yachts, electronic equipment and clothing, usually imported) at the expense of long-term investment.[171]

In fact, the Dutch study on the use of criminal finance (1999) found high expenditure on luxury cars, jewellery, boats and planes: 79% of criminals used some of their criminal income to purchase luxury vehicles, 37% purchased jewellery, music instruments and art, 33% bought planes or boats and 29% had a luxurious lifestyle.[172] In developing countries, these

[166] Austrian Press Agency, *Hypo zahlte 100 Millionen Euro an Mafia-Boss*, 24 August 2010; "Carinthian capers – The Austrian bank at the centre of a growing web of scandal", *The Economist*, 9 September 2010.
[167] UNDCP, "Economic and Social Consequences of Drug Abuse and Illicit Trafficking", *UNDCP Technical Serices*, No. 6, p. 28.
[168] D. Farah, "Russian Crime Finds Haven in Caribbean", *The Washington Post*, October 7, 1996.
[169] H. Nelen, 'Criminaliteit en onroerend goed', Presentation held at the seminar *Zicht op misdaad en onroerend goed*, 15 December 2004, Centre for Information and Research on Organised Crime, Amsterdam, Vrije Universiteit, quoted in quoted in B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 130-131.
[170] J. R. Meloen, H. Landman, J de Miranda,.van Eekelen and S. van Soest, "Buit en Besteding, Een empirisch onderzoek naar de omvang, de kenmerken en de besteding van misdaadgeld", Den Haag: Reed Business Information, 2003, quoted in Brigittte Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 130.
[171] International Narcotics Control Board (INCB), *Report of the International Narcotics Control Board for 2002*, Sales No. E.03.XI.1, New York 2002, p. 5..
[172] J. R. Meloen, H. Landman, J de Miranda,.van Eekelen and S. van Soest, "Buit en Besteding, Een empirisch onderzoek naar de omvang, de kenmerken en de besteding van misdaadgeld", Den Haag: Reed Business Information, 2003, quoted in

conspicuous consumption patterns result in high levels of imports. This can also affect the foreign trade balance and thus the current account balance and may raise the country's risk in the eyes of the international rating agencies and thus the interest rates at which countries obtain loans from foreign banks. This can, in turn, impact negatively on overall economic growth. While the import ratio of goods and services in low-income countries amounted to 27 % of GDP on average at the beginning of the new millennium (34% of GDP in 2009)[173] the items usually purchased by drug trafficking groups in the main drug producing countries resulted - according to INCB estimates - in expenditures on imported goods of up to 80 % of total expenditure.[174]

Organized crime groups often spend money on weapons. Such purchases not only prevent alternative spending on capital equipment, but also contribute to the spread of fear and violence, making the overall business environment more unfavourable.

Distortion of exports and potential problems with investment and economic growth

In case of 'export-oriented' organized crime (such as drug trafficking with final destination in other countries), the economic impact for the societies concerned may appear positive in the short run. Additional foreign exchange may enter the local economy. Any money entering the economy tends to have, at least initially, a positive economic impact. Some of the money will be spent, thus creating new employment opportunities. Some of the money will be invested, thus creating even larger employment opportunities in the medium term, and some of the money will be saved, thus enabling financial institutes to grant credits and loans to the business sector and individuals which in return will act as a stimulus to the local economy.

As reported by the INCB, the economic multipliers from drug exports can be expected to be far lower (around 1.55) than from licit exports (2.45).[175] This is a result of a higher propensity for drug traffickers to live luxurious lifestyles, and to invest their illicit funds less productively into the economy. Nonetheless, the net result – in the short term at least - will be positive from a purely economic point of view.[176]

The mid- to long-term consequences, however, tend to be negative. One possible mechanism is the danger of a revaluation of the exchange rate linked to the inflows of illicit funds. This phenomenon – known and discussed in the literature as 'Dutch Disease'[177] - tends to reduce the competitiveness of legally produced goods and services at the local level. The legal exports (notably of manufactured goods) will be replaced by illegal exports – linked to organized crime. In other words, legitimate exports will be systematically crowded out by illicit drug exports. Overvalued exchange rates also pose problems for domestic industry

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B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, pp. 124-126.

[173] World Bank, *World Development Indicators 2010*, Washington 2010.

[174] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 5.

[175] The multiplier, assuming a savings ratio of 20 per cent and an import ratio of 26 per cent, was calculated as follows: 1 ÷ (1-(0.8 x 0.74)) = 2.45.

[176] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1,New York 2002, p. 3.

[177] The 'Dutch disease' is a concept in economics that explains the relationship between an increase in the exploitation of natural resources and a decline in the manufacturing sector. An increase in revenues from natural resources (including production of illicit drugs) will make a given nation's currency stronger compared to that of other nations, resulting in the nation's other exports becoming more expensive for other countries to buy, making the manufacturing sector less competitive. The term was apparently first coined by *The Economist* in an article in 1977, describing the decline of the manufacturing sector in the Netherlands following the discovery of a large natural gas field in 1959.

producing for the local market because domestic production will be increasingly substituted by imports. Thus, overvalued exchange rates can ruin entire economic sectors, which, once they cease to exist, may be difficult to re-establish. [178]

As illegal exports do not show up in official export statistics, the officially calculated foreign trade balance will deteriorate. International rating agencies will use this information to downgrade the credit risk of the countries concerned. This implies higher interest rates on loans taken out abroad, and thus higher costs of conducting business in the countries concerned, leading to overall lower economic growth rates.

Such effects will only be noticed once certain thresholds are exceeded. Thus, smaller countries, characterized by small domestic economies, will be far more vulnerable to such effects than larger countries with much larger legal economies. Irrespective of the scenario described above, large-scale operations of organized crime in a country usually go hand in hand with large-scale corruption as well as violence and intimidation. These phenomena deter investment activities by the legal sector, including direct foreign investment, and thus deter economic growth.

Has there been any empirical evidence of financial inflows from transnational organized crime having had a negative consequence for economic growth? Such 'evidence' is difficult to establish in a scientific way, but there are certainly some interesting correlations.

It can be noticed, for instance, that in the Andean region, the increase of coca bush cultivation in the Plurinational State of Bolivia and Peru in the 1980s and in Colombia in the 1990s did not lead to an overall increase in economic growth. Though coca bush cultivation increased drastically in Colombia in the second half of the 1990s, economic growth lost momentum and even turned negative.[179] Despite falling coca leaf production in the Plurinational State of Bolivia and Peru in the late 1990s, economic growth accelerated in these countries throughout most of the decade, exceeding the average for Latin American countries. Notably in the period 1998-1999, when coca leaf production headed towards a low, economic growth in both the Plurinational State of Bolivia and Peru remained above the Latin American average. In parallel, economic growth declined in Colombia, in spite of increased coca bush cultivation. Over the 2000-2009 period, in contrast, Colombia showed a massive decline in the area under coca leaf cultivation (-58%).[180] Over the same period, economic growth amounted to 3.9% per year, up from 0.4% over the 1995-99 period, when the area under coca leaf production in Colombia more than tripled. [181]

Trends in South-West Asia showed similar patterns. Though reliable data on Afghanistan's economic development in the 1980s and the 1990s do not exist, economic growth was undoubtedly negative between 1980 and 2000, despite the fact that Afghanistan engaged in large-scale illicit opium poppy cultivation as of the beginning of the 1980s. Overall living standards clearly fell in the 1980s and the 1990s. The massive increase in opium production, which turned Afghanistan into the world's largest producer of illicit opiates in the early 1990s, helped fuel civil wars, but clearly failed to contribute to the country's overall social and economic development. Similarly, the strong declines in Afghan opium production

[178] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1,New York 2002, p. 6.
[179] World Bank, *World Development Indicators 2001,* Washington, D.C., 2002; United Nations International Drug Control Programme, *Global Illicit Drug Trends 2002,* United Nations publication, Sales No. E.02.XI.9, Vienna 2002.
[180] UNODC, *2010 World Drug Report*, Vienna 2010, p. 162.
[181] World Bank, *World Development Indicators & Global Development Finance*, 15 December 2010.

between 2007 and 2010 (-56%) did not go hand in hand with any significant decline in overall economic activity in that country. Instead, according to preliminary estimates, it ran in parallel to a significant increase in the country's GDP (38% over the 2007-2010 period).[182] Similarly, the Islamic Republic of Iran and Pakistan, which reduced or completely eliminated opium poppy production in the late 1980s, recorded positive economic growth rates in both the 1980s and the 1990s. In the Islamic Republic of Iran, the economic growth rates rebounded in the 1990s, without any recourse to illicit opium production. Pakistan, which reported the strongest declines in opium production in the early 1980s, actually had the strongest economic growth rate (6.3 % annually) in South-West Asia, exceeding growth at the global level (3.4 %).[183]

A similar pattern of economic development was also observed in South-East Asia. In the 1980s, illicit opium production in Myanmar increased tenfold, but at the same time, the country had the lowest GDP growth rate in the region. When opium production declined by one third in the 1990s, GDP growth increased to the levels reported in neighbouring countries. If the clandestine sector, based on illicit opium production, had provided a basis for economic development, Myanmar would not have had the lowest per capita income in the region, based on purchasing power parities.[184] In contrast, Thailand was the first country in the region to drastically curtail illicit opium production (from 146 tons in the period 1965-1966 to less than 60 tons in 1982, 6 tons in 2000[185] and negligible levels in 2010). As the levels of illicit opium production in Thailand fell in the 1980s, its GDP growth rate exceeded those of neighbouring countries, and today Thailand is one of the most developed countries in the region. Similarly, data for both the Lao People's Democratic Republic and Viet Nam showed higher GDP growth rates in the 1990s than in the 1980s. The increase in the GDP growth rate in both countries took place while opium production declined there in the 1990s.[186]

Similarly, there was increased illicit production of cannabis and opium in Lebanon, notably in the Bekaa valley, in the 1980s, fuelled by the civil war, the breakdown of state institutions and efforts by the various militias to use the illicit drug trade to finance their activities.[187] Though there are no reliable estimates of economic growth in the country in the 1980s, it can be assumed that the destruction of production capacity resulted in negative growth. In the 1990s, the authorities succeeded in implementing a ban on illicit drug production.[188] At the time of the enforcement of the ban on illicit drug production in Lebanon, GDP grew by 7.7 per cent annually; a growth rate that was clearly above the world average (2.5 % per year) and the average for the Middle East and North Africa (3.0 % per year).[189]

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There is, of course, no proof that increased illicit drug production, and thus a stronger involvement of organized crime, is necessarily linked to a decline in overall economic activity. The involvement of organized crime is only one of many different factors that

[182] *CIA World Factbook* , *Afghanistan*, Washington, February 2011.
[183] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 4.
[184] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 4.
[185] Ronald D. Renard, *Opium Reduction in Thailand 1970- 2000: a Thirty-Year Journey,* Chiang Mai, Silkworm Books, Bangkok 2002.
[186] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 4.
[187] US Department of State, *International Narcotics Control Strategy Report*, Washington 2000.
[188] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 4.
[189] World Bank, *World Development Indicators 2001,* Washington, D.C., 2002.

determine economic development. Economic decline and poor growth are often the result of overall situations of instability, which, in turn, may lead to increased illicit crop cultivation, drug trafficking and a stronger role for organized crime because of a country's weak governmental and administrative capacity. Good governance, in contrast, tends to have a positive impact on growth.

The most obvious explanation for the apparent negative correlation between illicit drug production and economic development is that engaging in such illicit activities has been, in many parts of the world, a reaction to deteriorating economic conditions. That was the case with the expansion of illicit coca production and illicit opium poppy cultivation in the Andean region and in Asia in the 1980s. Such a defensive reaction does not address the underlying social tensions and development problems in a society. Indeed, it may perpetuate them; eventually, it may itself become the key impediment to development as the emergence of a large illicit sector with the involvement of organized crime can result in the destabilization of the state, the political system, the economy and civil society.[190]

Unfair competition

Organized crime can infiltrate or acquire control of large sectors of the economy through investment.[191] A consequence of sizable illicit funds in the legal sector is the ability of enterprises financed out of illegal income to undercut current market prices.[192]

At first sight, this may appear positive for customers and create short-term welfare gains. It creates, however, the risk (often in combination with the use of violence) that enterprises financed by criminal money will crowd out existing legal enterprises. Local merchants and businesses may find that they cannot compete with front companies organized to launder and conceal illicit funds. Such front companies may offer their goods and services at below-market rates or even at a loss because their primary objective is to launder money. Such companies do not need to compete properly in the marketplace and do not have to make any profits for their owners.[193] If criminals acquire and operate businesses and use additional criminal funds to subsidize them, this provides them with a clear competitive advantage over legitimate ventures to the point where they will drive them out of business.[194] In other words, illicitly funded enterprises create unfair competition and can bankrupt legitimate competition. In such cases, low prices do not reflect efficiency. Instead, they may force more efficient, legitimate companies out of business, leaving entire sectors in the hands of unlawful enterprises[195].

Once certain thresholds are reached, such criminal enterprises may also act as deterrents for investment activities, including direct foreign investment. Such situations are particularly

[190] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 5.
[191] Financial Action Task Force, "Money Laundering FAQ", http://www.fatf-gafi.org/document/29/0,3746,en_32250379_32235720_33659613_1_1_1_1,00.html#Wheredoesmoneylaunderingoccur
[192] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 5.
[193] World Bank, "Topic: Anti-Money Laundering", Washington D.C., 2011. http://web.worldbank.org/WBSITE/EXTERNAL/WBI/WBIPROGRAMS/PSGLP/0,,contentMDK:20292990~menuPK:461615~pagePK:64156158~piPK:64152884~theSitePK:461606,00.html
[194] D. Masciandaro, E. Takáts and B. Unger, *Black Finance: The Economics of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 157.
[195] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 6.

problematic as new competitors are deterred from entering the market.[196] This will negatively affect overall economic growth. The mid- and long-term consequences are thus clearly negative.

Corruption

A further consequence of the existence of large criminal financial flows in a country, even if legally invested, are the attempts by criminal groups to use their financial power to corrupt the authorities[197] and to gain additional advantages for their 'legal' enterprises. Once criminals have infiltrated a particular sector of the economy, they will further bribe public officials in order to gain control of even larger sectors of the economy.[198] Once established, they will drive out legitimate business competitors and introduce a parasitic, anti-competitive approach to business. Thus an additional risk is created, namely that such enterprises, sourced by criminal money, will eventually crowd out existing legal enterprises.[199]

In parallel, the criminal organizations will also use their funds to engage in corruption to protect their criminal activities. Since criminal organizations must mitigate the risk of detection and prosecution, they tend to use the proceeds of their illegal activities to corrupt law enforcement, justice and other officials, to obstruct justice and to enable them to operate without interference. [200]

Data show that corruption levels tend to be high in poor countries with high levels of organized crime (such as Somalia, Afghanistan and Myanmar) and smaller in the more developed countries, which have good governance structures and where the criminal funds – expressed as a proportion of the size of the total economy – tend to play a smaller role. This effect can also be seen in some developed countries that suffer from the presence of strong organized crime groups (such as Italy).

While there appears to be a clear negative correlation between GDP per capita and corruption, a causality relationship is more difficult to establish. Activities of transnational organized crime, including the funds generated from drug trafficking, seem to play a key role. Trafficking and corruption seem to be mutually reinforcing, that is, corruption fosters trafficking by transnational organized criminals and trafficking activities increase corruption.

Risks of real sector volatility

Another negative aspect of investment derived from criminal funds is the lack of continuity. Much of the investment actually depends on the continuity of the illicit operations. Because of their illegality, the criminal flows may be suddenly disrupted and related investments may disappear due to law enforcement actions and prosecution.[201] As a consequence, several

[196] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 6.
[197] Financial Action Task Force, "Money Laundering FAQ", http://www.fatf-gafi.org/document/29/0,3746,en_32250379_32235720_33659613_1_1_1_1,00.html#Wheredoesmoneylaunderingoccur
[198] P. Alldridge, 'The Moral Limits of the Crime of Money Laundering', *Buffalo Criminal Law Review*, 2002, No. 5 (1), pp. 279–319.
[199] D. Masciandaro, E. Takáts and B. Unger, *Black Finance: The Economics of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 96 and p. 178.
[200] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2010, United Nations publication, Sales No. E.11.XI.1, New York 2011, p 3.
[201] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 6.

crime-dependent regions, such as those depending on illicit drug production, trafficking, piracy, unlawful exploitation of natural resources et cetera have undergone steep boom and bust cycles.

This has applied, in particular to the limited number of sectors that are often targets for criminal money, such as construction and real estate. Once the real estate boom draws to a close – for example, as the supporting criminal activities are curtailed - the bubble can burst and prompt a general economic decline.[202] This has been observed at the local level in various countries at certain periods in time. There are – at least so far – no reports that they would have affected the national economy of any country. However, the subprime mortgage crisis in the USA (2007) showed that problems in the property sector can spill over to the national economy and - through new instruments such as mortgage-backed securities - even prompt a global recession (2008/2009).

Strengthening of skewed income and wealth distributions

The emergence of huge criminal money flows tends to result in more pronounced uneven income and wealth distributions.[203] This may – at first sight – appear to be counter-intuitive, as criminals are often perceived to come from the poorer sections of society. However, once criminal organizations are formed, they tend to generate large amounts of money quickly. Subsequently, more money will be concentrated in just a few hands, and existing uneven income distributions may become even more marked.

This was true, for instance, in several of the Andean countries, when drug-related income flourished. The emergence of the drug business went hand in hand with a consolidation, partly even increase, of already skewed income and wealth distributions.

At the same time, skewed income distributions also seem to act as an incentive for criminal activities. In other words, if large sections of society - notably young men - do not perceive to have any realistic chance to get a decent income through hard work, while observing that a few people in society live an extremely luxurious lifestyle without any hard work, they may become tempted to engage in criminal activities. Such patterns are exacerbated by high levels of unemployment, migration and related problems.

Thus, income inequalities can be seen as causes for a rapid expansion of organized crime activities, though the establishment of an illicit sector is likely to further accentuate already existing income inequalities. This is particularly problematic because income inequality is at the heart of various social problems faced by many countries, including illicit drug production and trafficking, thus forming a vicious circle. In other words, unequal income in itself is apparently an important factor affecting the readiness of people to participate in the illicit drug industry, while the existence of an illicit drug industry fosters unequal income distribution.[204]

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[202] UNDCP, "Economic and Social Consequences of Drug Abuse and Illicit Trafficking", *UNDCP Technical Serices*, No. 6, p. 28.
[203] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 5.
[204] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 6.
[204] World Bank, *World Development Indicators 2010*, Washington 2010.

In fact, World Bank data show that several of the main drug producing or trafficking countries are also characterized by uneven levels of income distribution.

Similarly, UNDP data reveal high levels of income inequality (with Gini coefficients of more than 50) for several drug producing or transiting countries.

For comparison, the average Gini coefficient of income distribution at the global level is 41. It is also 41 in the USA, 31 in the EU and 25 in Japan. The illicit drug sector in the USA – and thus organized crime supplying these substances – is far more prominent than in the EU, and the illicit drug sector in Japan is smaller than in the USA and appears to also be smaller than in the EU. Even within the EU, countries with relatively higher levels of income inequality such as Italy, the UK or Spain (with Gini coefficients ranging from 35-37) are also the European countries with relatively stronger illicit drug sectors and transnational organized crime groups benefiting from this, while the illicit drug sectors are more limited in countries characterized by low income inequalities (with Gini coefficients ranging from 22-25).[205]

Distortion of economic statistics and thus potential errors in economic policy decision-making

Another potential problem linked to the existence of a large illicit sector in an economy is a strong likelihood that economic data and statistics will no longer accurately reflect reality. Criminal finance can distort economic data and thus macroeconomic analysis and policy-making.[206]

The potential problem of low credit ratings due to – on paper – large foreign trade and current account deficits has already been discussed. In addition, macroeconomic management can be negatively affected. Macroeconomic management is generally difficult, but with huge criminal funds circulating in the economy, it becomes even more so. Macroeconomic management is particularly challenging when there is a need for economic policy changes, such as austerity measures to curb inflation. In such situations, a large illicit sector may counteract government action, either by preventing a predicted outcome from materializing, prolonging the time frame for macroeconomic stabilization or prompting the government to take measures that are too drastic, thus creating unemployment and social unrest.

The reaction to inflationary pressure, for instance, often results in the introduction of more severe monetary policies, leading to a decline in the money supply and increased interest rates. However, such policies will only prove successful if the economy reacts in a predictable way to the changes. But when large amounts of illicit funds are available in an economy, and criminally financed entities can take over some of the lending functions, either internally (that is, within the enterprises belonging to the organized crime group) or externally (that is, granting loans to other businesses), the economy may continue to overheat, showing marked inflation, despite a restrictive monetary policy. This may prompt authorities to take even more drastic monetary and other restrictive economic measures. In the process, legitimate businesses, without access to illicit funds, may be squeezed out of the market due to high interest rates, and new legitimate investments may not take place.[207]

[205] UNDP, *Human Development Report 2010, The Real Wealth of Nations: Pathways to Human Development*, New York 2010, pp. 152-155.
[206] P. J. Quirk, *Macroeconomic Implications of Money Laundering*, International Monetary Fund Working Paper 96/66, Washington D.C., June 1996.
[207] International Narcotics Control Board (INCB), Report of the International Narcotics Control Board for 2002, Sales No. E.03.XI.1, New York 2002, p. 6.

Undermining the credibility of legal institutions

A key problem of many of the effects discussed so far is their impact on the credibility of the legal institutions in a country. If the income and wealth disparities are large and increasing, unemployment is rising due to strong sector volatilities, erroneous macroeconomic decision-making because of inaccurate underlying economic data, various distortions in the allocation of resources due to unfair competition, and when society is confronted with widespread corruption at all levels – prompted by the existence of a relatively large and expanding criminal sector - the authority of the legal institutions and the state as such will suffer as well. This will also happen, as pointed out by Tanzi, if criminal elements are able to generate sufficient capital to corrupt the political process, for instance by financing election campaigns that result in the installation of 'more friendly administrations'.[208] In other words, the funds generated by criminal organizations provide them with economic and potentially even political power and can weaken the social fabric, collective ethical standards and ultimately the democratic institutions of society.[209]

Investment into the economy, however, depends to a significant extent on the credibility of state institutions. Legal investors – both domestic and foreign - will not risk their money if they cannot trust the authorities. Without investment, economic growth will be seriously jeopardized. Moreover, many ordinary citizens will ask themselves whether it is really worthwhile and still appropriate to play by the rules. This can have a negative impact on overall tax morality in a country, which leaves the authorities with a limited number of choices: either reduce government services and thus risk the future of the country, or increase existing tax rates, thus further raising the incentives to evade taxes, and creating a potentially vicious circle .

c) Implications of laundering criminal financial flows, including in foreign jurisdictions

So far, the discussion centred on the impact of criminal flows for the underlying criminal activities, followed by an analysis of major impacts once the flows enter the licit sector. A remaining question concerns the impact of the criminal funds on the financial sector,[210] notably if such funds are laundered abroad and are not flowing back to the 'originating countries.'

The proportions of the proceeds of crime that are laundered via the financial system differ from country to country. One can assume that they will be higher in the more developed countries where cash transactions are less prominent while lower proportions may be expected in some developing countries. Nonetheless, the overall proportions seem to be substantial. Based on a study of criminal cases in the Netherlands in the late 1990s, Unger

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[207] World Bank, *World Development Indicators 2010,* Washington 2010.
[208] V. Tanzi, " Macroeconomic Implications of Money Laundering", in E.U. Savona, *Responding to Money Laundering, International Perspectives*, Harwood Academic Publishers, Amsterdam, 1997, pp. 91-104.
[209] Financial Action Task Force, "Money Laundering FAQ", http://www.fatf-gafi.org/document/29/0,3746,en_32250379_32235720_33659613_1_1_1_1,00.html#Wheredoesmoneylaunderingoccur
[210] For a discussion on the financial instruments used for laundering proceeds of crime and possible indications for persons working in the financial sector to detect money-laundering attempts see UNODC, *Risk of Money Laundering through Financial Instruments*, Bogota 2010.

calculated that some 80% of the total crime proceeds were laundered.[211] Another study from the Netherlands arrived at proportions ranging from 71% to 75% of total crime proceeds. These calculations included income from a number of crime activities which are domestic rather than transnational in nature, such as burglaries or theft, for which the proportions going into money-laundering appear to be small. [212].

Available research suggests that the immediate impact for the recipient countries of criminal funds – at least in the short run – is positive. This applies in particular to so-called transfer countries of criminal money, that is, countries through which the money flows.[213]

If larger geographical areas are analysed as a unity, the opposite is true. Empirical research undertaken by Quirk in 18 industrialized countries found that increases in money-laundering activities were associated with reductions in overall annual economic growth rates.[214] Similarly, research undertaken by Unger in 17 OECD countries of West Europe and North America suggests that overall money-laundering dampens economic growth. Each US$1 billion increase of money-laundering in the 17 OECD countries tends to reduce overall economic growth by 0.03 to 0.06 percentage points in these countries.

However, Unger's study also showed that if money-laundering was separated from the predicate crime - for instance by only looking at the recipient countries and assuming that such laundering activities would not lead to other crimes in the recipient countries - the money-laundering-related coefficients turn positive, resulting in an expected economic growth of between 0.06 and 0.14 percentage points of GDP for each US$1 billion laundered.[215] In other words, money-laundering itself does not dampen economic growth; the crime that it is intermingled with does.[216]

How can this be explained? If money is wired from the country where the underlying criminal activities are taking place to a transfer country, additional value added is created in financial services, without such countries having to bear the costs of crime.[217] Such criminal funds invested abroad will assist in expanding the financial services sector in the recipient countries. They will help create income for individuals, for the companies concerned as well as for the recipient state in terms of higher tax income. There are also indications that in some countries the interest rates – partly due to the inflow of such money – may have been lower than it would otherwise have been.[218] This assists domestic trade and industry to get improved access to finance, which may help them invest and generate economic wealth.

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[211] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 124.

[212] M. Smekens, M. and M Verbruggen (2004), *De Illegale Economie in Nederland*, Centraal Bureau voor de Statistiek, 20 September 2004; van der Heide, W. and A.Th.J. Eggen , *Criminaliteit en rechtshandhaving 2001*, WODC: 211 Onderzoek en Beleid. Centraal Bureau voor de Statistiek, Meppel: BOOM Juridische Uitgevers, Den Haag quoted in B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 66.

[213] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 150.

[214] P.J. Quirk, "Money Laundering: Muddying the Macroeconomy", *Finance & Development*, No. 34 (1), 1997, pp. 4-9.

[215] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 155.

[216] J. Ferwerda and S.Z. Bosma, *The effect of money laundering on economic growth*, Paper for Onderzoekskeuzevak Economie von de Publieke Sector, Utrecht School of Economics, Utrecht 2006, q

[217] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 150.

[218] The argument holds more for closed economies than for open economies. (B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 140).

In fact, many of the offshore centres in Europe, North America, the Caribbean, South-East Asia and even in Sub-Saharan Africa which may attract funds emerging from various criminal activities, have been doing economically well. This applies not only to countries or jurisdictions in the developed world, but also to many of the small international financial centres in developing regions.[219] This may also explain why a number of other countries, including some small island countries in Oceania, have been trying to copy this 'recipe for success.'

[219] P. R. Land and G. M. Milesi-Ferretti, "International Monetary Fund, Cross-Border Investment in Small International Financial Centers", *IMF Working Paper*, WP/10/38, Washington D.C., February 2010 and Tax Justice Network, "IMF: trillions lost offshore", March 15, 2010; l E.J. Fagan, "IMF: Trillions of Undeclared Funds Offshore", *Task Force, Financial Integrity & Economic Development*, March 15, 2010.

Offshore Financial Centre (OFC)

One frequently encountered term in the literature on money-laundering is '*Offshore Financial Centres*' (OFCs). Offshore finance means the provision of financial services by banks and other agents to non-residents. These services include the borrowing of money from non-residents and lending to non-residents. An Offshore Financial Centre was subsequently characterized by the International Monetary Fund (IMF) as a centre where the bulk of financial sector activity was offshore on both sides of the balance sheet, where the transactions were initiated elsewhere, and where the majority of the institutions involved were controlled by non-residents. Jurisdictions were referred to as Offshore Financial Centres according to IMF if the *(i) jurisdictions had relatively large numbers of financial institutions engaged primarily in business with non-residents; (ii) financial systems with external assets and liabilities out of proportion to domestic financial intermediation designed to finance domestic economies; and more popularly (iii) if they provided some of the following 'services': low or zero taxation; moderate or light financial regulation; banking secrecy and anonymity.* (Source: IMF, *Offshore Financial Centers*, IMF Background Paper, June 2000).

A subsequent definition, proposed by IMF in 2007, was to avoid all subjective presumptions and to reduce the definition to just one dimension: "*An OFC is a country or jurisdiction that provides financial services to nonresidents on a scale that is incommensurate with the size and the financing of its domestic economy.*" As an indicator for defining the OFC status of a country it was proposed to consider the "*ratio of net financial services exports to GDP.*" (Source: IMF, "Concept of Offshore Financial Centers: In Search of an Operational Definition", *IMF Working Paper* WP/07/87, April 2007). The problem with this proposed new approach was that it would have reduced the existing list while including some larger countries (such as the UK).

As of mid-2008, the IMF started to refrain from using the OFC terminology. It integrated its *Offshore Financial Center Assessment Program* with its general *Financial Sector Assessment Program*. A new differentiation was introduced. Some of the original OFCs now show up under the category of "*Small International Financial Centers*", though this excludes countries or territories such as Switzerland, Luxembourg, Cyprus, Singapore or Hong Kong SAR of China. (IMF, "Cross-Border Investment in Small International Financial Centers", *IMF Working Paper*, WP/10/38, February 2010.)

Problems to generate sustainable economic growth

Bartlett points out that studies on the effectiveness of establishing offshore financial centres (OFC) as an economic development strategy have failed to show that notional offshore financial centers – unless based on sound rules and regulations - contribute significantly to the surrounding economy. Thus, they do not form a sound basis for sustained economic growth. In fact, economic growth was shown to depend on sound domestic financial institutions.[220]

[220] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, (Report for the Asian Development Bank), May 2002, p. 10.

Disregarding the true origin of criminal funds cannot and should not be a 'recipe for success.' Not doing so is also a moral obligation. While every country has the right to introduce policies aiming at improving the well-being of its citizens, this cannot be done by inflicting misery on others. There is a clear need for international rules, which must be adhered to by as many players as possible. The next chapter will give an overview of the international instruments that have been developed over the last few decades in order to prevent international money-laundering.

But even from a purely economic point of view it remains questionable whether a 'free rider' approach is an effective response in the long run. A number of arguments have been put forward which raise doubts whether a strategy based on ignoring international rules and standards in the fight against money-laundering will provide positive results for the countries concerned.

Volatility in the financial sector with macro-economic implications

Financial centres depending on tainted money may find themselves exposed to high levels of *volatility*. This can affect the financial institutions concerned. Financial institutions that accept illegal funds cannot rely on those funds as a stable deposit base. Large amounts of laundered funds are likely to be suddenly wired to other financial markets as part of the laundering process, threatening the institution's liquidity and solvency. A financial institution's reputation and integrity can be irrevocably harmed if involved in money-laundering.[221] Bartlett provides a case study of a run on a bank in the Balkan region, sparked by various economic actors following reports that this bank was heavily involved in major money-laundering operations[222].

Money-laundering, however, can also lead – at a much higher level - to volatility in exchange rates and interest rates due to unanticipated in- and outflows of capital.[223] Such volatility of both exchange rates and interest rates tends to be negative for overall economic growth. Periods of a sharp surge in financial activity, followed by an equally sharp decline will result in severe macroeconomic instability. This tends to be further aggravated as local authorities, in general, will not be in a position to introduce offsetting monetary or exchange rate measures in a timely manner.[224]

Moreover, the initial inflow of funds can lead to either an appreciation of the exchange rate or an increase in the monetary base. An increase in the exchange rate may entail a reduction in exports and an increase in imports, and thus a deterioration of the foreign trade balance, which can jeopardize whole sectors of the economy. An increase in the monetary base, on the other

[221] World Bank, "Topic: Anti-Money Laundering", Washington D.C., 2011. http://web.worldbank.org/WBSITE/EXTERNAL/WBI/WBIPROGRAMS/PSGLP/0,,contentMDK:20292990~menuPK:461615~pagePK:64156158~piPK:64152884~theSitePK:461606,00.html

[222] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, Report for the Asian Development Bank, May 2002, p. 11.

[223] V. Tanzi, 'Money Laundering and the International Financial System', *IMF Working Paper*, International Monetary Fund, No. 96/55, Washington D.C. 1996; McDonell, R., 'Money Laundering Methodologies and International and Regional Counter-Measures', Presented at: Gambling, Technology and Society: Regulatory Challenges for the 21st Century, Rex Hotel, Sydney, 7–8 May, 1998; J. Boorman, and S. Ingves 'Financial System Abuse, Financial Crime and Money Laundering', IMF Background Paper, Washington D.C. 2001; Financial Action Task Force, *Money Laundering FAQ*, Washington D.C, 2011, http://www.fatf-gafi.org/document/29/0,3746,en_32250379_32235720_33659613_1_1_1_1,00.html

[224] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, Report for the Asian Development Bank, May 2002.

hand, can lead to rising prices, which may translate into higher wages and a reduction of the international competitiveness of the licit economy.[225]

Limited ability to maintain the separation between predicate crimes and money-laundering

Secondly, the question remains whether money-laundering and predicate crimes can always be properly geographically *separated.* Even if organized crime groups decide not to undertake their primary criminal activities (for example, drug trafficking) in the countries where they have their money invested, it would be unrealistic to assume that they would not engage in other criminal activities, such as corruption. In fact, a number of authors have argued that money-laundering can lead to spillover mechanisms from criminal money to crime. Because of the possibility of money-laundering in the financial sector, reinvestment of the money in illegal activities in the licit sector can be the consequence.[226] A model, first elaborated by Masciandaro, and later refined by Unger, suggests that the amounts of money laundered tends to lead to additional crime proceeds of between 6% and 10% of the original crime proceeds. Thus, a 'free-rider' attitude can backfire.[227]

In fact, there is a risk that financial institutions – and eventually even whole financial centres - will become corrupt or even controlled by criminal interest. Small developing countries are particularly vulnerable in this regard.[228]

Reputation of the financial centres

Thirdly, and probably more importantly, the "reputation" of a financial sector[229] plays an increasingly important role for legal investors. A reputation for integrity is one of the most valued assets by investors. Various forms of financial system abuse may compromise the reputation of financial institutions and jurisdictions, undermine investors' trust in them, and, therefore, weaken the financial system.[230]

In general, investors do not want to see their names associated with investments in financial centres that have a questionable reputation. Once the reputation of a financial centre is in jeopardy, there is a risk that legal investors will withdraw their funds. In other words, illegal transactions can contaminate legal ones.[231] Thus, financial sectors have a self-interest in not being associated with tainted money. The growing number of financial centres that have signed relevant international instruments and adopted at least basic financial control mechanisms to avoid the inflow of criminal finance in recent years is an indication.

Risk of legal sanctions

[225] V. Tanzi, 'Money Laundering and the International Financial System', *IMF Working Paper*, International Monetary Fund, No. 96/55, Washington D.C. 1996.
[226] D. Masciandaro, "Money Laundering: The Economics of Regulation", *European Journal of Law and Economics*, No. 7, 1999, pp. 225-240.
[227] B. Unger, *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company, 2007, p. 169.
[228] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, Report for the Asian Development Bank, May 2002.
[229] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, Report for the Asian Development Bank, May 2002, p. 9.
[230] International Monetary Fund, *Financial System Abuse, Financial Crime and Money Laundering*, IMF Background Paper, Washington D.C. 2001.
[231] This argument was already found in the literature more than a decade ago. P.J. Quirk, "Money Laundering: Muddying the Macroeconomy," *Finance & Development*, No. 34 (1), 1997, pp. 4-9.

Fourthly, lax anti-money-laundering enforcement measures can prompt legal sanctions by important trade and investment partners. This can more than offset the potential benefits from following a free-rider strategy. Such sanctions – for example, banning dollar transactions with countries concerned - can be damaging for financial centres that do not want to adhere to international rules and regulations.[232] Thus, incentives are created for financial centres to forego possible short-term benefits.

In order to guarantee the application of uniform, objective criteria, the Financial Action Task Force (FATF) engaged in an initiative on 'non-cooperative countries and territories' (NCCTs). Using 25 criteria, the FATF has been researching the potential weaknesses of international financial centres which enabled it to identify those where the regulations and practices significantly infringed the fight against money-laundering and international cooperation. Based on these findings, the FATF established a list of countries and territories with important flaws in their anti-money-laundering instruments or a lack of willingness to cooperate in combating money-laundering. Published first in 2000, this list has been periodically updated. The FATF requested that the identified countries and territories adapt their systems to internationally recognized standards. The mere threat of appearing on this list of 'non-cooperative countries and territories' has already prompted may countries and territories to improve their systems, so that they could be removed from the list.[233]

Key role of global anti-money-laundering efforts – enabling the authorities to follow the money trail

Finally, one should not forget the key role of any anti-money-laundering legislation: enabling state authorities to follow the money trail in order to detect underlying criminal activities and to dismantle the groups involved. This remains the main reason for the implementation of anti-money-laundering measures. The operations of criminal organizations are potentially vulnerable to detection via the money trail and there are good reasons for the authorities to exploit these vulnerabilities.

Any such system, however, will only work if there are no loopholes. Thus, there is a need for comprehensive, all-inclusive participation in international money-laundering efforts at the global level. Otherwise, the system will be only as strong as its weakest link and will be exploited by organized crime.

Though it is important to be aware of the various socio-economic consequences, economic considerations alone cannot and should not be decisive factors for enacting or implementing appropriate legislation or regulation. The key objective has to remain the fight against organized crime in all its dimensions. Anti-money-laundering legislation and measures form an integral part of this endeavour.

The subsequent chapter will give an overview of existing instruments at the international level to fight organized crime and related money laundering activities. The discussion will show that most of the necessary instruments to fight organized crime and related money laundering activities exist already. Yet, the existing 'success' rate of identifying criminal capital flows is limited, to say the least. Based on all available estimates, were speaking of less than 1% of the total amounts that are being laundered. Data collected by the US State Department suggest

[232] B. L. Bartlett, *The negative Effects of Money Laundering on Economic Development*, Report for the Asian Development Bank, May 2002, p. 9.
[233] PolyReg, *FATF Sanctions*, February 2011, http://www.polyreg.ch/e/sanktionslisten/fatf.html.

that some US$3.1 billion were seized in connection with money-laundering activities in 38 countries out of 62 countries analysed (2010 or latest year available), more than 80% of this was seized in North America.[234] This would be equivalent to some 0.2% of the best estimate of the extent of money-laundering at the global level. In comparison, more than 20% of the globally produced illicit opiates are being seized and more than 40% of the cocaine.[235] Are money-launderers really so much smarter than drug traffickers, or is there something wrong with the existing control system? The problem appears not to be a lack of international instruments (as will be shown in the next chapter), but shortcomings in the implementation of existing instruments in a number of jurisdictions.

[234] US Department of State, *International Narcotics Control Strategy Report* 2010 and 2011; Department of Justice Assets Forfeiture Fund for fiscal year 2010; Department of Treasury Assets Forfeiture Fund for fiscal year 2010.
[235] UNODC, *World Drug Report 2010*, Vienna 2010.

4) Existing international instruments to tackle the problem

A number of legal instruments have developed over the last few decades dealing with various aspects of organized crime at the international level. Key elements in all these instruments consisted of measures aiming at fostering international cooperation and harmonizing the approaches taken.

The by far longest history of legal instruments to deal with specific aspects of organized crime has been related to international drug control. Since the beginning of the 20th century, a number of conventions have been developed, signed and ratified, dealing with various aspects the drug problem. This process started with the 1909 Opium Conference in Shanghai and the *1912 Hague International Opium Convention* which became a truly international instrument after World War I, once countries signing the peace treaties de-facto also ratified the drug convention. The organized crime aspect related to transnational drug trafficking was implicitly present from the start and was particularly highlighted in the *1936 Geneva Convention for the Suppression of the Illicit Traffic in Dangerous Drugs*.

The currently valid drug conventions are the:

- *Single Convention on Narcotic Drugs, 1961 as amended by the 1972 Protocol Amending the Single Convention on Narcotics Drugs, 1961*
- *Convention on Psychotropic Substances 1971*
- *United Nations convention against Illicit Traffic in Narcotics Drugs and Psychotropic Substances, 1988*

Transnational organized crime covers, of course, a much broader field than drug trafficking, even though the latter – given the financial dimensions and its links to violence and corruption - continues to play a key role within the area of organized crime.
A new momentum to expand the scope of cooperation at the global level was gained by the *Millennium Declaration*[236] adopted by the Heads of State meeting at the United Nations in September 2000 which reaffirmed the need for more decisive measures to guarantee and strengthen the rule of law. The Declaration, *inter alia*, made it clear that (para 6) "*men and women have the right to live their lives and raise their children … free from … fear of violence, oppression or injustice*" and in para 9 the Heads of State and Government resolved "*to intensify our efforts to fight transnational crime in all its dimensions, including trafficking as well as smuggling in human beings and money laundering*" . Taking all of this into account, a special convention was signed a few months later in December 2000 to promote international cooperation in preventing and combating transnational organized crime. This became known as the

- *United Nations Convention against Transnational Organized Crime (TOC), 2000* (also known as the Palermo Convention)
  This convention also contains two Protocols:
  - *Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime*

[236] *United Nations Millenium Declaration*, Resolution adopted by the General Assembly (A/55/L.2). http://www.un.org/millennium/declaration/ares552e.htm

- *Protocol against the Smuggling of Migrants by Land, Sea and Air, supplementing the United Nations Convention against Transnational Organized Crime*

In line with the above approach, Member States subsequently also agreed on a further

- *Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition (adopted by General Assembly resolution 55/255 of 31 May 2001).*

In addition to the TOC convention, a special convention was drafted, signed and ratified a few years later, dealing with the specific problems related to corruption, the

- *United Nations Convention against Corruption. 2003*

A special convention focussing exclusively on money laundering does not exist. However, most of the above mentioned conventions do not only deal with drug trafficking, corruption and other areas of organized crime but they also demand the contracting parties to criminalize activities undertaken to hide or launder the proceeds related to such predicative crimes and foresee measures to confiscate such proceeds. This reflects the fact that illicit financial flows have been understood to be highly detrimental for society at large, *de-facto* providing criminals with strong incentives to undertake such crimes as long as they do not have to fear to loose the crime related proceeds again. Moreover, illicit financial flows can result large-scale corruption, disturbances of competition, violence and economic equilibria and can contribute towards a weakening of the state, thus jeopardizing the rule of law.

Against this background a number of stipulations in Conventions as well as Resolutions and Action Plans, passed by the international community and by selected groups of countries have been geared towards effectively fighting illicit financial flows and money-laundering at the national, regional and international levels. The most important instruments containing specific stipulations against money laundering include the:

- *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988*
- *FATF recommendations*
- *1998 Political Declaration* and the related Action Plan ("Countering Money-Laundering"),
- *United Nations Convention against Transnational Organized Crime, 2000*
- *United Nations Convention against Corruption. 2003*
- *2009 Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to counter the World Drug Problem,*
- 2010 *Salvador Declaration on Comprehensive Strategies for Global Challenges: Crime Prevention and Criminal Justice Systems and Their Development in a Changing World*

The most relevant stipulations in these legal instruments will be discussed below.

1. *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988*

The first major international agreement in this field was the *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988* (also known as

the 1988 Vienna Convention). The at the time almost revolutionary stipulations against money laundering were introduced against the background of a rapidly rising economic power of internationally operating drug cartels as of the late 1980s. Given their financial power, they started to corrupt whole regions and intimidated the general public by means of violence.

The key Articles o the 1988 Vienna Convention with regard to money laundering can be summarized as follows:

- The Convention obliges parties to make drug-related money-laundering activities a criminal offence (Art. 3 – for text, see Annex).

- The Convention foresees to confiscate such proceeds (Art. 5 – see Annex). The Convention also invited member states to remit parts of such funds to 'intergovernmental bodies specializing in the fight against illicit traffic in and abuse of narcotic drugs and psychotropic substances'.

- Money laundering also became an extraditable offence at the international level, though such extraditions remained subject to a number of preconditions, such as the existence of bilateral extradition treaties. If a country had restrictions in extraditing nationals, the Convention foresaw that such a county should consider to judge its national(s) according to the law of the requesting Party. (Art. 6).

- Mutual legal assistance also extends to the fight against such illegal capital flows (Art.7 – see Annex).

- The Convention also made it clear that bank secrecy cannot be used as an excuse for not acting.

The 1988 Vienna Convention is today almost universally adhered to (184 States Parties as of July 2010) and has formed for many countries the basis for their anti-money laundering legislation.

2. *FATF Recommendations*

At the Paris Economic Summit of the Group of Seven (G-7) in 1989, France and the USA, in the presence of the president of the European Commission, proposed an initiative that led to the establishment of a new inter-governmental body, the Financial Action Task Force (FATF) on Money Laundering. This body was intended to become an international policy-making body in the fight against money laundering and was created to generate the necessary political will to bring about legislative and regulatory reforms to counter the abuse of the financial system by criminals.

In 1990, the FATF promulgated its initial "Forty Recommendations" which provided a general anti-money laundering (AML) framework, starting with the ratification and implementation of the 1998 Vienna Convention while extending anti-money laundering from drug trafficking to all serious offences.

Key provisions are:

- Recommendation 1 sets out that money laundering activities related to offences that are punishable by a minimum penalty of more than six months and a maximum penalty of more than one year's imprisonment constitute serious offences. Money laundering related to such offences has to be criminalized.

- Recommendation 3 asks countries to take appropriate legislative measures to enable their competent authorities to confiscate property laundered as well as proceeds from money laundering or predicate offences.

- Recommendations 4 lays down that secrecy laws should not inhibit implementation of the FATF Recommendations and Recommendation 5 asks financial institutions not to keep anonymous accounts or accounts with fictitious names and that they should apply due diligence, including identifying and verifying the identify of their customers, notably when establishing business relations and carrying out transactions above designated thresholds.

- Recommendations 10 specifies that financial institutions should maintain for at least five years all necessary records.

- Recommendation 13 lays down that financial institutions have to report suspicious transactions to the appropriate financial intelligence unit (FIU).

- Recommendations 15 sets out that financial institutions have to develop appropriate programmes against money laundering, including internal policies, screening procedures and employee training programs.

- Recommendation 18 makes it clear that countries should not approve the establishment or continued operation of shell banks and that other financial institutions should refuse to enter into relationship with such shell banks with foreign financial institutions permitting their accounts to be used by such shell banks.

- Recommendation 19 asks countries to 'consider the feasibility' of reporting all currency transactions above a fixed amount to a national central agency.

- Recommendation 26 asks for the establishment of Financial Intelligence units (FIU).

- Recommendations 36-39 deal with the need to reduce restrictions for money laundering related mutual legal assistance, enable confiscations and extraditions. Thus countries should not deny legal assistance on the grounds that national laws require financial institution to maintain secrecy or confidentiality.

The Forty Recommendations were revised in 1996 and again in 2003, eventually covering also the non-banking sector, including various other financial sectors, such insurances, and a number of 'gatekeeper' professions such as real estate agents, dealers in precious metals, accountants, lawyers and notaries. In addition, the FATF launched 9 Special Recommendations on Terrorist Financing following September 11, 2001.

The FATF Recommendations were a clear step forward in providing a sufficiently detailed framework for legal action. Even though membership in the FATF more than doubled over

the years - from originally 16 to 34 as of 2007[237] – one key problem for the FATF in the initial years was to gain international acceptance of these Recommendations beyond the participating FATF states.

3. *1998 Political Declaration* and the related Action Plan ("Countering Money-Laundering"),

The obligations resulting from the 1988 Convention were further detailed in the *1998 Political Declaration*[238] and the related Action Plan ("Countering Money-Laundering"), passed unanimously by the UN General Assembly at its twentieth Special Session on the World Drug Problem, held 8-10 June 1998.

This foresaw, inter alia, the

"*Establishment of an effective financial and regulatory regime to deny criminals and their illicit funds access to national and international financial systems, thus preserving the integrity of financial systems worldwide…*" including,

> *(i) Customer identification and verification requirements applying the principle of "know your customer", in order to have available for competent authorities the necessary information on the identity of clients and the financial movements that they carry out;*
> *(ii) Financial record-keeping;*
> *(iii) Mandatory reporting of suspicious activity;*
> *(iv) Removal of bank secrecy impediments to efforts directed at preventing, investigating and punishing money-laundering; …*

Additionally, in the preamble to the Action Plan, reference was made to a United Nations Commission on Narcotic Drugs (CND) resolution which *de facto* elevated the status of the 40 recommendations of the Financial Action Task Force (FATF) as the global standard in the fight against money-laundering.[239] The far more detailed FATF recommendations were thus *de facto* introduced through the back-door into the international system as the standards for fighting money-laundering.

4. *United Nations Convention against Transnational Organized Crime, 2000*

In the subsequent *United Nations Convention against Transnational Organized Crime* (TOC Convention),[240] passed in December 2000, the criminalization of money-laundering was extended from drug-related money-laundering activities to all forms of money-laundering derived from proceeds of crime, notably serious crime (Article 6). This was an important step ahead, although this convention does not have – as yet – the same adherence level (157 States Parties as of July 2010) as the 1998 Convention. The content of the TOC Convention gets more complicated if the predicate offence was committed in another country. Offences

[237] FATF, About the FATF, http://www.fatf-gafi.org/pages/0,3417,en_32250379_32236836_1_1_1_1_1,00.html
[238] In the preamble of the 1998 Political Declaration Member States promised to "… *make special efforts against the laundering of money linked to drug trafficking …*".
[239] Recalling Commission on Narcotic Drugs resolution 39/5 of 24 April 1996 in which the Commission noted that "the forty recommendations of the Financial Action Task Force established by the heads of State or Government of the seven major industrialized countries and the President of the European Commission remained the standard by which the measures against money-laundering adopted by concerned States should be judged."
[240] UNODC, *United Nations Convention against Transnational Organized Crime and the Protocols thereto*, New York, 2004.

committed outside the jurisdiction of a State Party only constitute a predicate offence for subsequent money-laundering if: (a) it was a criminal offence in the foreign jurisdiction, and (b) it was a criminal offence under the domestic law of the State Party implementing the convention (Art. 6, para 2, (c)). Tax evasion, for instance, may be a criminal offence in one jurisdiction and an administrative offence in another. Thus, money-laundering linked to tax evasion is not necessarily covered by the TOC Convention, in contrast to money-laundering linked to all kinds of 'serious crime', that is, offences entailing maximum prison sentences of at least four years (Art. 2).

The '*Measures to combat money-laundering'* are summarized in Article 7, which basically repeats existing anti-money-laundering techniques, including customer identification, record keeping, reporting of suspicious transactions, et cetera. A new element was the obligation for countries to establish 'financial intelligence units' to serve as national centres for the collection, analysis and dissemination of information regarding potential money-laundering and the implementation of *"measures to detect and monitor the movement of cash and appropriate negotiable instruments across their borders"*.

5. *United Nations Convention against Corruption. 2003*

The issue of money laundering was also taken up in the *United Nations Convention against Corruption, 2003,* and are summarized in Article 14 "Measures to prevent money-laundering", in Article 52 "Prevention and detection of transfers of proceeds of crime" and Article 54 "Mechanisms for recovery of property through international cooperation in confiscation". The basic idea here is to prevent money laundering related to corruption though the actual measures foreseen in dealing with the problem of money laundering, are not limited to corruption related money laundering but to all types of transfers related to the illicit acquisition of personal wealth. Thus, in the preamble the convention speaks of the need to '*prevent, detect and deter in a more effective manner international transfers of illicitly acquired assets and to strengthen international cooperation in asset recovery*. The underlying '*proceeds of crime*' are defined in Article. 2 as "*any property derived from or obtained, directly or indirectly, through the commission of an offence*". While providing a good summary of necessary measures to prevent and fight money laundering, the convention, does not really include many significant new elements for the fight against money laundering, which would go beyond those laid down in the Convention against Transnational Organized Crime. Perhaps the most important new element is found in Article 14, para 4 in which the FATF recommendations are de-facto brought up to the international level, not only for drug related money laundering (as was already the case in the 1998 Political Declaration and the related Action Plans), but for money laundering in general. Article 14, para 4 makes it explicit that '*In establishing a domestic regulatory and supervisory regime under the terms of this article … States Parties are called upon to use as a guideline the relevant initiatives of regional, interregional and multilateral organizations against money-laundering"*.

6. *2009 Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to counter the World Drug Problem,*

Despite of all of these efforts, Member States recognized in the *2009 Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced*

Strategy to counter the World Drug Problem,[241] adopted at the High-Level Segment of the 52nd session of the CND, 12 March 2009, that (Art. 29) *"illicit crop cultivation and illicit drug production, manufacturing, distribution and trafficking have been increasingly consolidated into a criminally organized industry generating enormous amounts of money, laundered through the financial and non-financial sectors…"*. They thus committed themselves to *"strengthening the effective and comprehensive implementation of regimes for countering money-laundering and to improving international cooperation, including judicial cooperation, in order to prevent, detect and prosecute such crimes, dismantle criminal organizations and confiscate their illicit proceeds…"*. Member States decided *"to establish 2019 as a target date for States to eliminate or reduce significantly and measurably*:*… money-laundering related to illicit drugs"*.

Part III, subheading E of the Plan of Action was dedicated to measures '*countering money-laundering*' At the outset it was stated that (Art. 50) *"The laundering of money derived from illicit drug trafficking and other serious crimes continues to be a global problem that threatens the security and stability of financial institutions and systems, undermines economic prosperity and weakens governance systems."*

Countries committed themselves (Art. 51) to strengthen existing legislative frameworks, inter alia, by

> "(i) *Widening the scope of predicate crimes for money-laundering to include all serious crimes, giving due consideration to crimes related to the misuse of new technologies, cyberspace and electronic money transfer systems and to transnational cash smuggling….*
> (iii) *Promoting the use of internationally accepted asset-sharing procedures in international confiscation cases, such as the Model Bilateral Agreement on the Sharing of Confiscated Proceeds of Crime or Property, adopted by the Economic and Social Council in its resolution 2005/14…*; and
> (vii) *Making money-laundering an extraditable offence…"*

as well as by *" Establishing new or strengthening existing financial and regulatory regimes for banks and non-bank financial institutions, including natural and legal persons providing formal or informal financial services…"* and by the *".., establishment of dedicated financial intelligence units to serve as national centres for the collection, analysis and dissemination of suspicious transaction reports …"*. (for details, see Annex).

The importance of the *2009 Political Declaration and Plan of Action* with regard to measures against money-laundering is that it also applies to UN Member States that have not – as yet – signed and ratified the TOC Convention.

7. 2010 *Salvador Declaration on Comprehensive Strategies for Global Challenges: Crime Prevention and Criminal Justice Systems and Their Development in a Changing World*

The importance of actions against money laundering was also highlighted in the 2010 *Salvador Declaration on Comprehensive Strategies for Global Challenges: Crime Prevention and Criminal Justice Systems and Their Development in a Changing World* (April 2010). This Declaration, adopted by the 12th UN Congress on Crime Prevention and Criminal Justice

[241] UNODC, *Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter The World Drug Problem,* High-level segment, Commission on Narcotic Drugs, Vienna, 11-12 March 2009.

(Salvador, Brazil, 12-19 April 2010) emphasized (Art. 22) the need for the adoption of effective measures to implement the provisions on preventing, prosecuting and punishing money-laundering contained in the United Nations Convention against Transnational Organized Crime and the United Nations Convention against Corruption and encouraged Member States to develop strategies to combat money-laundering based on the provisions of these two Conventions. In Article 23 it goes a step further and encourages "*Member States to consider developing strategies or policies to combat illicit financial flows and to curb the harmful effects of uncooperative jurisdictions and territories in tax matters"* In Article 24 the Declaration recognized the '*need to deny criminals and criminal organizations the proceeds of their crimes'* and called on Member States to '*adopt effective mechanisms for the seizure, restraint and confiscation of proceeds of crime and to strengthen international cooperation to ensure effective and prompt asset recovery'*.

5) Preliminary summary and conclusions

The issue of illicit financial flows has been emerging in recent years as a phenomenon of global importance that cannot be ignored. At the same time, research in this area is still limited, scattered, based on a large number of assumptions (as opposed to empirical findings) with results – in most cases – not directly comparable once rigorous scientific criteria are applied. As one expert correctly observed, estimates of the proceeds of crime and of the subsequent volumes of laundered money are still not much more than indicative of the orders of magnitude involved. But they confirm that money-laundering is of sufficient scale to merit policy attention.

Keeping these caveats in mind, the study aims at providing some answers concerning the likely amounts of illicit funds generated, and the extent to which they are being laundered at the global level. In addition, efforts are made to identify the magnitude of a selected number of illicit crime activities and how these crime proceeds are being distributed. It is hoped that the approach used, starting with the analysis of concrete criminal markets, will further stimulate research in these areas. The study also examines the socio-economic impact of illicit financial flows and provided an overview of existing international legal instruments to tackle these flows.

Extent of financial flows

Combining the various groups of estimates discussed in this report shows a surprising convergence, irrespective of the internal divergence of the various estimates. The overall best estimates of criminal proceeds are close to 3.6% of GDP or US$2.1 trillion in 2009. The best estimates of the amounts laundered are close to 2.7% of GDP or US$1.6 trillion in 2009. The best estimates of the amounts laundered fall well within the IMF's original 'consensus range' of 2%-5% of GDP, though the data also suggest that the best estimates are situated towards the lower end of the range. If tax- and customs-related money-laundering activities were included, results would move towards the upper end of the IMF consensus range, or – depending on the extrapolation models applied - slightly beyond. On the other hand, if only transnational crime related proceeds were considered, the available estimates for laundering would fall to levels around 1% of GDP, and thus below the IMF consensus range.

Summary of estimates of criminal proceeds and amounts laundered at the global level

	Reference year / period	Criminal proceeds		Amounts laundered		
		Best estimate	Range	Best estimate	range	
As % of GDP		3.6%	(2.3% - 5.5%)	2.7%	(2.1% - 4.0%)	
In trillion US$	2009	2.1	(1.4 - 3.2)	1.6	(1.2 - 2.3)	
Memo: IMF 'consensus range' (as % of GDP)	*1998*			*3.5%*	*2.0%*	*5.0%*

Selected criminal sectors

The study is developing more detailed calculations of illicit financial flows from selected criminal sectors and the likely distribution of these flows across countries and regions. The first step is to establish the size of the market considered; the next, to analyse the extent to

which excess money is generated, that would be available for laundering purposes. The last step is the development of a model to help allocate the flows according to a number of parameters, such as the extent of bank secrecy, geographical closeness, extent of legal business transactions et cetera. Work is still ongoing and more results will be generated as the study proceeds.

A number of innovative approaches are being explored in the analysis of the financial flows of these markets. Even for markets that have been studied for years, such as the one for cocaine, the analysis revealed a number of knowledge gaps. While efforts have been made, over time, to estimate the number of users in each country, very little is still known – even after some 100 years of international drug control - about per capita consumption levels, purity-adjusted prices or the number of drug dealers in a given country. There is information about prices at the retail and wholesale levels for a sufficiently large number of countries. However, far less is known about the purity levels, even though forensic laboratories operate across the globe.

Regular and systematic information exchanges between law enforcement and drug control agencies is apparently still limited in many countries. Another problem is that the calculation of prices at the wholesale level, defined as prices at the kilogram level, and the retail level, defined as prices at the gram level, is not sufficient for the calculation of retail and wholesale profits. There are indications that a far higher proportion of funds generated at the wholesale level are being laundered than at the retail level. Thus, a distinction between retail and wholesale profits is crucial.

A further challenge is that very little is known about the number of drug dealers in a country and their distribution in terms of income. This is again crucial for estimating the extent to which drug dealers earn money in excess of their normal living expenditures. A key concern is to generate a reasonable distribution of small-scale versus large-scale traffickers, as only large-scale traffickers will generate sufficient funds for subsequent money-laundering purposes. Another major difficulty is related to the question how to allocate drug transit profits correctly. A number of efforts have been made to address and overcome these challenges, but it is clear that more systematic research is needed on the matter.

Socio-economic impact

The study also examines the potential socio-economic impact of the some US$2 trillion of crime proceeds that are generated every year. First of all, these criminal flows help existing crime to flourish and expand, with a large number of negative socio-economic consequences, depending on the specific predicate crimes. Second, the funds generated – even when invested in the legal sector – will entail a number of negative micro- and macro-economic consequences. Third, there is an additional set of problems when such funds are laundered in foreign jurisdictions and invested abroad.

Implications of money flows for the underlying predicate crime

The negative socio-economic impact arising from illicit flows generating further criminal activity is most apparent when it comes to drugs. There tends to be a significant 're-investment' of illicit funds into drug trafficking operations which have major negative implications for society at large. If goods are stolen, the gains by the criminals involved will be, overall, equivalent to the losses of the victim (or of his or her insurance company). From

an economic perspective, such crime can be seen as a 'transfer,' which should not affect the overall economy significantly.

The situation with regard to drugs is, however, quite different. The gains of the criminal groups can be linked to the expenditure of the drug users. Up to this point, one person's losses can be seen as equivalent to another person's gains. However, the 'losses' of the drug users go far beyond their expenditure on drugs. Large socio-economic costs are linked to drug consumption. While the crime proceeds of organized crime resulting from drugs were estimated at around 0.6% of GDP - equivalent to some US$350 billion - at the global level in 2009, the overall average estimate of the costs associated with illicit drug use (based on data from 12 countries in North America, Europe, South America and Oceania) amounted to 1.2% of GDP, or US$700 billion if extrapolated to the global level. Thus, available data suggest that these costs were in fact twice as high as the income for organized crime. This indicates a net loss for society, and not simply some kind of 'transfers' from some individuals to organized crime. For the USA and the UK, where estimates of both the size of the domestic drug market and the costs linked to drug abuse are available, data suggest that these costs are three times as high as the drug sale figures (USA: economic costs of drug abuse: US$181 bn; drug sales US$64 bn in 2000/2002; UK: economic costs: £18.9 bn versus drug sales: £5.3 bn in 2003/2004 for England and Wales and 2006 for Scotland). Data for the US suggest that some 70% of the cost were related to productivity losses, including from premature death and drug abuse-related illnesses. Data for England and Wales, which also include drug-related crime, show that some 90% of the total cost was actually crime-related. Other problems – at the global level - include health problems, trafficking-related violence and corruption.

Implications of investment of criminal financial flows in the legal economy

The implications of the investment of crime-related funds in the legal sector are mainly related to the risks of:

- Distortions in the resource allocation from high-yielding investments to investments that run a low risk of detection
- Distortion of prices, notably in the real estate sector
- Distortion of consumption and impact on imports
- Distortion of exports and potential problems with investment and economic growth
- Unfair competition; risks of crowding out licit activities and negative impact on direct foreign investment
- Corruption
- Risks of real sector volatility
- Strengthening of skewed income and wealth distributions
- Distortion of economic statistics and thus potential errors in economic policy decision taking
- Undermining the credibility of legal institutions

One of the clearest differences between investment based on licit sources and that based on criminal funds affects the decision-making parameters of how to invest these funds. While a 'normal investor' will direct his or her investment into a venture that will yield the highest possible return based on his willingness to take economic risks, the predominant parameter for an investor of criminal funds is a strong guarantee that the criminal origin of the investment will not be detected. This leads to investment decisions that focus on concealment, while accepting low rates of return. A sub-optimal resource allocation is the consequence. Criminal funds thus have a negative effect on economic growth by diverting resources to less

productive activities. Criminal finance encourages conspicuous consumption at the expense of long-term investment. The purchase of weapons is also not productive for society at large. If invested, a study in the Netherlands revealed that criminal income went in particular into real estate, into normal bank accounts, or into various 'business activities', mostly 'coffee shops' (where cannabis is sold), normal shops, hotels and brothels. None of this is particularly productive from a wider economic perspective. Similarly, the cartels in Colombia in the 1990s were reported to have concentrated their investment mainly in real estate and in the construction sector.

Another potential danger, notably for smaller economies, is a revaluation of the exchange rate linked to the inflows of illicit funds. This phenomenon – known in the literature as 'Dutch Disease' - tends to reduce the competitiveness of legally produced goods and services. Legal exports (notably of manufactured goods) will be replaced by illegal exports. Overvalued exchange rates also pose problems for domestic industry producing for the local market because domestic production will be increasingly substituted by imports. Thus, overvalued exchange rates can ruin entire economic sectors, which, once they cease to exist, may be difficult to re-establish.

In some cases, organized crime can also infiltrate or acquire control of large sectors of the economy through investment. A subsequent consequence of large amounts of illicit funds in the legal sector is the ability of such enterprises to undercut current market prices. This may initially appear positive for customers and create some short-term welfare gains. It creates, however, the risk that such enterprises will crowd out existing legal ones.

Another consequence of the existence of large criminal finance, even if legally invested, is that criminal groups will attempt to use their financial power to corrupt the authorities and gain additional advantages for their 'legal' enterprises, thus driving out legitimate business competitors.

There is also a risk that huge criminal money flows will result in a more uneven income and wealth distribution. World Bank data, for instance, show that several of the main drug producing or trafficking countries are characterized by highly uneven levels of income distribution. Once criminal organizations are formed, they tend to expand quickly. Subsequently, more money is concentrated in a few hands, and existing uneven income distributions may become more marked. At the same time, income inequality can be also seen as one cause of the expansion of organized crime as is increases the readiness of some people (mostly young unemployed males) to participate in the illicit sectors of the economy.

Another potential problem linked to the existence of a huge illicit sector in an economy is a strong likelihood that economic data and statistics will not reflect reality any longer. Criminal finance can distort economic data and thus macroeconomic analysis and policymaking. Macroeconomic management is particularly difficult when there is a need for economic policy changes, such as austerity measures to curb inflation. In such situations, a huge illicit sector may counteract government action, either by preventing a predicted outcome from materializing, prolonging the time frame for macroeconomic stabilization or prompting the Government to take measures that are too drastic, thus creating unemployment and social unrest. In the process, legitimate business, which does not have access to illicit funds, may be squeezed out of the market.

A further problem is that the credibility of legal institutions may suffer. If income and wealth disparities are very large and increasing, unemployment is rising due to strong sector volatilities, if inadequate macro-economic decisions are made because of inaccurate underlying economic data and/or various distortions in the allocation of resources, due to unfair competition, and if society is confronted with widespread corruption – prompted by the existence of a large and expanding criminal sector - the credibility and authority of the state will suffer as well. An additional problem arises from the possibility of organized crime groups generating sufficient capital to corrupt the political process, for instance by financing election campaigns to install more 'friendly' administrations. In other words, the funds generated by criminal organizations may provide them with enough economic and even political power to weaken the social fabric, collective ethical standards, and ultimately, the democratic institutions of society.

Implications of laundering criminal financial flows, including in foreign jurisdictions

Finally, there are a number of socio-economic implications linked to the laundering of the financial flows. Research undertaken in industrialized countries repeatedly found that increases in money-laundering activities were associated with reductions in overall annual economic growth rates. One study, for instance, found that each US$1 billion laundered reduced overall economic growth by 0.04-0.06 percentage points in the 17 researched OECD countries.

The issue becomes more complicated once laundering affects foreign jurisdictions. The net impact of money-laundering activities for the 'originating countries,' where the underlying crimes have been committed, tends to worsen once the crime proceeds leave the country. Assuming that trafficking profits originated primarily from drugs sold to the local population, such profits were actually siphoning off purchasing power from the country concerned. If these funds were re-invested in the local economy, at least some of the initial losses in purchasing power could be offset. When they are used for money-laundering purposes and subsequent investment abroad, the country concerned will suffer the full financial loss.

The situation looks – at first sight - different for the recipient countries of such funds. Available research suggests that the immediate impact for these countries is not necessarily negative. A study showed that if money-laundering was separated from the predicate crime the money-laundering-related coefficients turned positive. However, studies on the effectiveness of establishing offshore financial centres (OFC) as an economic development strategy failed to show that notional offshore financial centers – unless based on sound rules and regulations - contribute to the surrounding economy. They could not provide a basis for sustained economic growth. Thus, even from a purely economic point of view - and disregarding all moral arguments - it remains questionable whether a 'free rider' strategy can be effective in the long run.

Arguments in this context relate, inter alia, to the likelihood of increased volatility in the financial sector with negative macro-economic implications. The volatility may relate to the swift reactions by criminal groups to shift the location of their laundered funds, which – once certain levels are surpassed - can threaten a financial institution's liquidity and solvency. Moreover, there is a risk that banks or even whole jurisdictions may lose their reputation and integrity if involved in large-scale money-laundering operations. This can lead to the withdrawal of funds from licit investors and – as experienced in a few cases - may even lead to the bankruptcy of the institutions concerned.

Against this background, financial centres have developed a self-interest of not being associated with 'tainted money' and have signed relevant international instruments to avoid the inflow of such criminal finance. Whether money-laundering and predicate crimes can remain properly separated geographically over longer periods of time is also questionable. Research has suggested that the amounts of money laundered tend to prompt additional crime proceeds of between 6% and 10% of the original crime proceeds. Even if the predicate crime will not take place in the money-laundering jurisdiction, it is likely that criminal groups would use their financial power, at least for corruption, which will impact negatively on the jurisdictions concerned. Finally, non-cooperating jurisdictions run a risk of legal sanctions. Such sanctions (for example, banning dollar transactions with countries concerned) can more than offset potential short-term gains from following a free-rider strategy and can be damaging for the financial centres concerned.

Key role of global anti-money laundering efforts – enabling the authorities to follow the money trail and seize the proceeds of illicit activities

The key role of anti-money laundering legislation is to enable authorities to follow the money-trail in order to detect underlying criminal activities and to dismantle the groups involved. This remains the main reason for implementing anti-money laundering measures, irrespective of all other considerations. The operations of criminal organizations are potentially vulnerable to detection via the money trail, and there are good reasons for the authorities to exploit these vulnerabilities.

Such a system will only work well if there are no loopholes. Thus, there is a clear need for universal participation in international money-laundering efforts at the global level, and a high degree of transparency. Otherwise the system will remain only as strong as its weakest link and will be exploited by organized crime.

While most of the necessary instruments to fight organized crime and related money-laundering activities already exist at the international level, the current 'success rate' of identifying criminal capital flows is limited. Based on all available estimates, less than 1% of the total amounts that are being laundered are seized.

Data collected by the US State Department suggest that some US$3.1 billion were seized in connection with money-laundering activities in 38 countries out of 62 countries analysed (2010 or latest year available), more than 80% of this was seized in North America. This would be equivalent to some 0.2% of the best estimate of the extent of money-laundering at the global level. In comparison, more than 20% of the globally produced illicit opiates are being seized and more than 40% of the cocaine. The question that arises is whether money-launderers really are so much smarter than drug traffickers, or whether there is something wrong with the existing control system? The problem does not seem to be a lack of international instruments – as illustrated in this report - but shortcomings in the implementation of existing instruments.

ANNEX: Text of relevant sections of international legal instruments

- **United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988**

Article 3:
"*Each Party shall adopt such measures as may be necessary to establish as criminal offences under its domestic law, when committed intentionally …*

(b) (i) The conversion or transfer of property, knowing that such property is derived from any offence or offences established in accordance with subparagraph (a) [i.e. drug related offences] …, or from an act of participation in such offence or offences, for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of such an offence or offences to evade the legal consequences of his actions;

(ii) The concealment or disguise of the true nature, source, location, disposition, movement, rights with respect to, or ownership of property, knowing that such property is derived from an offence or offences established in accordance with subparagraph (a) of this paragraph or from an act of participation in such an offence or offences:

(c) …(i) The acquisition, possession or use of property, knowing, at the time of receipt, that such property was derived from an offence or offences established in accordance with subparagraph (a) of this paragraph or from an act of participation in such offence or offences;…".

Article 5: CONFISCATION
compels Parties to:

1. "*…adopt such measures as may be necessary to enable confiscation of:*

(a) Proceeds derived from offences established in accordance with article 3, paragraph I, or property the value of which corresponds to that of such proceeds;

2. "…adopt such measures as may be necessary to enable its competent authorities to identify, trace, and freeze or seize proceeds, property, instrumentalities or any other things referred to in paragraph 1 of this article, for the purpose of eventual confiscation.

Article 6: EXTRADITION

I. This article shall apply to the offences established by the Parties in accordance with article 3, paragraph 1 [Note: this includes money laundering; see above].
2. Each of the offences to which this article applies shall be deemed to be included as an extraditable offence in any extradition treaty existing between Parties. The Parties undertake to include such offences as extraditable offences in every extradition treaty to be concluded between them.
3. If a Party which makes extradition conditional on the existence of a treaty receives a request for extradition from another Party with which it has no extradition treaty, it may consider this Convention as the legal basis for extradition in respect of any offence to which this article applies. The Parties which require detailed legislation in order to use this Convention as a legal basis for extradition shall consider enacting such legislation as may be necessary.

4. The Parties which do not make extradition conditional on the existence of a treaty shall recognize offences to which this article applies as extraditable offences between themselves.
5. Extradition shall be subject to the conditions provided for by the law of the requested Party or by applicable extradition treaties, including the grounds upon which the requested Party may refuse extradition.
6. In considering requests received pursuant to this article, the requested State may refuse to comply with such requests where there are substantial grounds leading its judicial or other competent authorities to believe that compliance would facilitate the prosecution or punishment of any person on account of his race, religion, nationality or political opinions, or would cause prejudice for any of those reasons to any person affected by the request.
7. The Parties shall endeavour to expedite extradition procedures and to simplify evidentiary requirements relating thereto in respect of any offence to which this article applies.

Article 7 on MUTUAL LEGAL ASSISTANCE,
compels Parties to:
1. " *afford one another… the widest measure of mutual legal assistance in investigations, prosecutions and judicial proceedings in relation to criminal offences established in accordance with article 3…*" [Note: this includes money laundering; see above]. including by
2. *(f) Providing originals or certified copies of relevant documents and records, including bank, financial, corporate or business records;*
(g) Identifying or tracing proceeds … for evidentiary purposes "
and it is made explicit that
5. "*A Party shall not decline to render mutual legal assistance under this article on the ground of bank secrecy*".

- **Political Declaration and Action Plan against Money Laundering adopted at the Twentieth Special Session of the United Nations General Assembly devoted to "countering the world drug problem together**

Resolution S-20/4 D **Countering Money-Laundering**

The General Assembly,

Recognizing that the problem of laundering of money derived from illicit trafficking in narcotic drugs and psychotropic substances, as well as from other serious crimes, has expanded internationally to become such a global threat to the integrity, reliability and stability of financial and trade systems and even government structures as to require countermeasures by the international community as a whole in order to deny safe havens to criminals and their illicit proceeds,

Recalling the provisions of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, according to which all parties to the Convention are required to establish money-laundering as a punishable offence and to adopt the measures necessary to enable the authorities to identify, trace and freeze or seize the proceeds of illicit drug trafficking,

Recalling Commission on Narcotic Drugs resolution 5 (XXXIX) of 24 April 1996,(21) in which the Commission noted that the forty recommendations of the Financial Action Task

Force established by the heads of State or Government of the seven major industrialized countries and the President of the European Commission remained the standard by which the measures against money-laundering adopted by concerned States should be judged, as well as Economic and Social Council resolution 1997/40 of 21 July 1997, in which the Council took note with satisfaction of the document entitled "Anti-drug strategy in the hemisphere", approved by the Inter-American Drug Abuse Control Commission of the Organization of American States at its twentieth regular session, held at Buenos Aires in October 1996 and signed at Montevideo in December 1996, and urged the international community to take due account of the anti-drug strategy in the hemisphere as a significant contribution to the strengthening of the Global Programme of Action adopted by the General Assembly at its seventeenth special session,(22)

Recognizing the political will expressed by the international community, especially as reflected in such initiatives as the Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime, adopted in 1990 by the Committee of Ministers of the Council of Europe, the Ministerial Communiqué of the Summit of the Americas Conference Concerning the Laundering of Proceeds and Instrumentalities of Crime, held at Buenos Aires in December 1995, and by such bodies as the Inter-American Drug Abuse Control Commission of the Organization of American States, the Asia/Pacific Group on Money Laundering, the Caribbean Financial Action Task Force, the Offshore Group of Banking Supervisors and the Commonwealth, all of which are well-recognized multilateral initiatives aimed at combating money-laundering and constitute legal or policy frameworks within which concerned States are defining and adopting measures against money-laundering,

Aware that the proceeds of illicit drug-trafficking and other illicit activities, which are laundered through banks and other financial institutions, constitute an obstacle to the implementation of policies designed to liberalize financial markets in order to attract legitimate investment, in that they distort those markets,

Emphasizing that there is a need to harmonize national legislation with a view to ensuring appropriate coordination of policies for combating money-laundering, without prejudice to the action each State is undertaking within its own jurisdiction to combat this form of criminality,

Recognizing the need to promote and develop effective mechanisms for the pursuit, freezing, seizure and confiscation of property obtained through or derived from illicit activities, so as to avoid its use by criminals,

Recognizing that only through international cooperation and the establishment of bilateral and multilateral information networks such as the Egmont Group, which will enable States to exchange information between competent authorities, will it be possible to combat effectively the problem of money-laundering,

Emphasizing the enormous efforts of a number of States to draw up and apply domestic legislation that identifies the activity of money-laundering as a criminal offence,

Realizing the importance of progress being made by all States in conforming to the relevant recommendations and the need for States to participate actively in international and

regional initiatives designed to promote and strengthen the implementation of effective measures against money-laundering,

1. Strongly condemns the laundering of money derived from illicit drug trafficking and other serious crimes, as well as the use of the financial systems of States for that purpose;

2. Urges all States to implement the provisions against money-laundering that are contained in the United Nations Convention against Illicit Trafficking in Narcotic Drugs and Psychotropic Substances of 1988 and the other relevant international instruments on money-laundering, in accordance with fundamental constitutional principles, by applying the following principles:

(a) Establishment of a legislative framework to criminalize the laundering of money derived from serious crimes in order to provide for the prevention, detection, investigation and prosecution of the crime of money-laundering through, inter alia:

(i) Identification, freezing, seizure and confiscation of the proceeds of crime;

(ii) International cooperation; and mutual legal assistance in cases involving money-laundering;

(iii) Inclusion of the crime of money-laundering in mutual legal assistance agreements for the purpose of ensuring judicial assistance in investigations, court cases or judicial proceedings relating to that crime;

(b) Establishment of an effective financial and regulatory regime to deny criminals and their illicit funds access to national and international financial systems, thus preserving the integrity of financial systems worldwide and ensuring compliance with laws and other regulations against money-laundering through:

(i) Customer identification and verification requirements applying the principle of "know your customer", in order to have available for competent authorities the necessary information on the identity of clients and the financial movements that they carry out;

(ii) Financial record-keeping;

(iii) Mandatory reporting of suspicious activity;

(iv) Removal of bank secrecy impediments to efforts directed at preventing, investigating and punishing money-laundering;

(v) Other relevant measures;

(c) Implementation of law enforcement measures to provide tools for, inter alia:

(i) Effective detection, investigation, prosecution and conviction of criminals engaging in money-laundering activity;

(ii) Extradition procedures;

(iii) Information-sharing mechanisms;

3. Calls upon the United Nations Office for Drug Control and Crime Prevention to continue to work, within the framework of its global programme against money-laundering, with relevant multilateral and regional institutions, organizations or bodies engaged in activities against money-laundering and drug trafficking and with international financial institutions to give effect to the above principles by providing training, advice and technical assistance to States upon request and where appropriate.

- **United Nations Convention against Transnational Organized Crime, 2000**

Article 6. Criminalization of the laundering of proceeds of crime

1. Each State Party shall adopt, in accordance with fundamental principles of its domestic law, such legislative and other measures as may be necessary to establish as criminal offences, when committed intentionally:

(a) (i) The conversion or transfer of property, knowing that such property is the proceeds of crime, for the purpose of concealing or disguising the illicit origin of the property or of helping any person who is involved in the commission of the predicate offence to evade the legal consequences of his or her action;
(ii) The concealment or disguise of the true nature, source, location, disposition, movement or ownership of or rights with respect to property, knowing that such property is the proceeds of crime;

(b) Subject to the basic concepts of its legal system:
(i) The acquisition, possession or use of property, knowing, at the time of receipt, that such property is the proceeds of crime;
(ii) Participation in, association with or conspiracy to commit, attempts to commit and aiding, abetting, facilitating and counselling the commission of any of the offences established in accordance with this article.

2. For purposes of implementing or applying paragraph 1 of this article:
(a) Each State Party <u>shall seek to apply paragraph 1 of this article to the widest range of predicate offences</u>;
(b) Each State Party shall include <u>as predicate offences all serious crime</u> as defined in article 2 of this Convention [i.e. offences punishable by a maximum prison sentence of at least 4 years] *and the offences established in accordance with articles 5* [<u>participation in organized crime group</u>] , 8 [<u>corruption</u>] *and 23* [<u>obstruction of justice</u>] *of this Convention. In the case of States Parties whose legislation sets out a list of specific predicate offences, they shall, at a minimum, include in such list a comprehensive range of offences associated with organized criminal groups;*
(c) For the purposes of subparagraph (b), predicate offences shall include offences committed <u>both within and outside the jurisdiction</u> of the State Party in question. However, offences committed outside the jurisdiction of a State Party shall constitute predicate offences only <u>when the relevant conduct is a criminal offence under the domestic law of the State where it is committed and would be a criminal offence under the domestic law of the State Party implementing or applying this article</u> had it been committed there;

(d) Each State Party shall furnish copies of its laws that give effect to this article and of any subsequent changes to such laws or a description thereof to the Secretary-General of the United Nations;
(e) If required by fundamental principles of the domestic law of a State Party, it may be provided that the offences set forth in paragraph 1 of this article do not apply to the persons who committed the predicate offence;
(f) Knowledge, intent or purpose required as an element of an offence set forth in paragraph 1 of this article may be inferred from objective factual circumstances.

- **United Nations Convention against Transnational Organized Crime**

Article 7. Measures to combat money-laundering

1. Each State Party:
(a) Shall institute a comprehensive domestic regulatory and supervisory regime for banks and non-bank financial institutions and, where appropriate, other bodies particularly susceptible to money-laundering, within its competence, in order to deter and detect all forms of money-laundering, which regime shall emphasize requirements for customer identification, record-keeping and the reporting of suspicious transactions;

(b) Shall, without prejudice to articles 18 and 27 of this Convention, ensure that administrative, regulatory, law enforcement and other authorities dedicated to combating money-laundering (including, where appropriate under domestic law, judicial authorities) have the ability to cooperate and exchange information at the national and international levels within the conditions prescribed by its domestic law and, to that end, shall consider the establishment of a financial intelligence unit to serve as a national centre for the collection, analysis and dissemination of information regarding potential money-laundering.

2. States Parties shall consider implementing feasible measures to detect and monitor the movement of cash and appropriate negotiable instruments across their borders, subject to safeguards to ensure proper use of information and without impeding in any way the movement of legitimate capital. Such measures may include a requirement that individuals and businesses report the cross-border transfer of substantial quantities of cash and appropriate negotiable instruments.

3. In establishing a domestic regulatory and supervisory regime under the terms of this article, and without prejudice to any other article of this Convention, States Parties are called upon to use as a guideline the relevant initiatives of regional, interregional and multilateral organizations against money-laundering.

4. States Parties shall endeavour to develop and promote global, regional, subregional and bilateral cooperation among judicial, law enforcement and financial regulatory authorities in order to combat money-laundering.

- **United Nations Convention against Corruption, 2003**

Article 14. Measures to prevent money-laundering

1. Each State Party shall:

(a) Institute a comprehensive domestic regulatory and supervisory regime for banks and non-bank financial institutions, including natural or legal persons that provide formal or informal services for the transmission of money or value and, where appropriate, other bodies particularly susceptible to money laundering, within its competence, in order to deter and detect all forms of money-laundering, which regime shall emphasize requirements for customer and, where appropriate, beneficial owner identification, record-keeping and the reporting of suspicious transactions;
(b) Without prejudice to article 46 of this Convention, ensure that administrative, regulatory, law enforcement and other authorities dedicated to combating money-laundering (including, where appropriate under domestic law, judicial authorities) have the ability to cooperate and exchange information at the national and international levels within the conditions prescribed by its domestic law and, to that end, shall consider the establishment of a financial intelligence unit to serve as a national centre for the collection, analysis and dissemination of information regarding potential money-laundering.
2. States Parties shall consider implementing feasible measures to detect and monitor the movement of cash and appropriate negotiable instruments across their borders, subject to safeguards to ensure proper use of information and without impeding in any way the movement of legitimate capital. Such measures may include a requirement that individuals and businesses report the cross-border transfer of substantial quantities of cash and appropriate negotiable instruments.
3. States Parties shall consider implementing appropriate and feasible measures to require financial institutions, including money remitters:
(a) To include on forms for the electronic transfer of funds and related messages accurate and meaningful information on the originator;
(b) To maintain such information throughout the payment chain; and
(c) To apply enhanced scrutiny to transfers of funds that do not contain complete information on the originator.
4. In establishing a domestic regulatory and supervisory regime under the terms of this article, and without prejudice to any other article of this Convention, States Parties are called upon to use as a guideline the relevant initiatives of regional, interregional and multilateral organizations against money-laundering. [De-facto reference to FATF].
5. States Parties shall endeavour to develop and promote global, regional, subregional and bilateral cooperation among judicial, law enforcement and financial regulatory authorities in order to combat money-laundering.

Article 52. Prevention and detection of transfers of proceeds of crime
1. Without prejudice to article 14 of this Convention, each State Party shall take such measures as may be necessary, in accordance with its domestic law, to require financial institutions within its jurisdiction to verify the identity of customers, to take reasonable steps to determine the identity of beneficial owners of funds deposited into high-value accounts and to conduct enhanced scrutiny of accounts sought or maintained by or on behalf of individuals who are, or have been, entrusted with prominent public functions and their family members and close associates. Such enhanced scrutiny shall be reasonably designed to detect suspicious transactions for the purpose of reporting to competent authorities and should not be so construed as to discourage or prohibit financial institutions from doing business with any legitimate customer.
2. In order to facilitate implementation of the measures provided for in paragraph 1 of this article, each State Party, in accordance with its domestic law and inspired by relevant initiatives of regional, interregional and multilateral organizations against money-laundering [de-facto reference to FATF], *shall:*

(a) Issue advisories regarding the types of natural or legal person to whose accounts financial institutions within its jurisdiction will be expected to apply enhanced scrutiny, the types of accounts and transactions to which to pay particular attention and appropriate account-opening, maintenance and recordkeeping measures to take concerning such accounts; and
(b) Where appropriate, notify financial institutions within its jurisdiction, at the request of another State Party or on its own initiative, of the identity of particular natural or legal persons to whose accounts such institutions will be expected to apply enhanced scrutiny, in addition to those whom the financial institutions may otherwise identify.
3. In the context of paragraph 2 (a) of this article, each State Party shall implement measures to ensure that its financial institutions maintain adequate records, over an appropriate period of time, of accounts and transactions involving the persons mentioned in paragraph 1 of this article, which should, as a minimum, contain information relating to the identity of the customer as well as, as far as possible, of the beneficial owner.
4. With the aim of preventing and detecting transfers of proceeds of offences established in accordance with this Convention, each State Party shall implement appropriate and effective measures to prevent, with the help of its regulatory and oversight bodies, the establishment of banks that have no physical presence and that are not affiliated with a regulated financial group. Moreover, States Parties may consider requiring their financial institutions to refuse to enter into or continue a correspondent banking relationship with such institutions and to guard against establishing relations with foreign financial institutions that permit their accounts to be used by banks that have no physical presence and that are not affiliated with a regulated financial group.
5. Each State Party shall consider establishing, in accordance with its domestic law, effective financial disclosure systems for appropriate public officials and shall provide for appropriate sanctions for non-compliance. Each State Party shall also consider taking such measures as may be necessary to permit its competent authorities to share that information with the competent authorities in other States Parties when necessary to investigate, claim and recover proceeds of offences established in accordance with this Convention.
6. Each State Party shall consider taking such measures as may be necessary, in accordance with its domestic law, to require appropriate public officials having an interest in or signature or other authority over a financial account in a foreign country to report that relationship to appropriate authorities and to maintain appropriate records related to such accounts. Such measures shall also provide for appropriate sanctions for non-compliance.

Article 54. Mechanisms for recovery of property through international cooperation in confiscation

1. Each State Party, in order to provide mutual legal assistance pursuant to article 55 of this Convention with respect to property acquired through or involved in the commission of an offence established in accordance with this Convention, shall, in accordance with its domestic law:
(a) Take such measures as may be necessary to permit its competent authorities to give effect to an order of confiscation issued by a court of another State Party;
(b) Take such measures as may be necessary to permit its competent authorities, where they have jurisdiction, to order the confiscation of such property of foreign origin by adjudication of an offence of money-laundering or such other offence as may be within its jurisdiction or by other procedures authorized under its domestic law; and
(c) Consider taking such measures as may be necessary to allow confiscation of such property without a criminal conviction in cases in which the offender cannot be prosecuted by reason of death, flight or absence or in other appropriate cases.

2. Each State Party, in order to provide mutual legal assistance upon a request made pursuant to paragraph 2 of article 55 of this Convention, shall, in accordance with its domestic law:
(a) Take such measures as may be necessary to permit its competent authorities to freeze or seize property upon a freezing or seizure order issued by a court or competent authority of a requesting State Party that provides a reasonable basis for the requested State Party to believe that there are sufficient grounds for taking such actions and that the property would eventually be subject to an order of confiscation for purposes of paragraph 1 (a) of this article;
(b) Take such measures as may be necessary to permit its competent authorities to freeze or seize property upon a request that provides a reasonable basis for the requested State Party to believe that there are sufficient grounds for taking such actions and that the property would eventually be subject to an order of confiscation for purposes of paragraph 1 (a) of this article; and (c) Consider taking additional measures to permit its competent authorities to preserve property for confiscation, such as on the basis of a foreign arrest or criminal charge related to the acquisition of such property.

- **2009 Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to counter the World Drug Problem**

Article 50:
"The laundering of money derived from illicit drug trafficking and other serious crimes continues to be a global problem that threatens the security and stability of financial institutions and systems, undermines economic prosperity and weakens governance systems."

Article 51 - towards an Integrated and Balanced Strategy to counter the World Drug Problem

Art. 51. Member States should continue to foster international cooperation by implementing the provisions against money-laundering contained in all relevant international and multilateral instruments, such as the 1988 Convention, the Organized Crime Convention and the Convention against Corruption and, in accordance with national legislation, the Financial Action Task Force Recommendations on Money Laundering, and also by:

(a) Establishing new or strengthening existing domestic legislative frameworks to criminalize the laundering of money derived from drug trafficking, precursor diversion and other serious crimes of a transnational nature in order to provide for the prevention, detection, investigation and prosecution of money-laundering by, inter alia:

(i) Widening the scope of predicate crimes for money-laundering to include all serious crimes, giving due consideration to crimes related to the misuse of new technologies, cyberspace and electronic money transfer systems and to transnational cash smuggling;

(ii) Adopting or strengthening legal measures providing for the identification, freezing, seizure and confiscation of the proceeds of crime and considering, where compatible with fundamental principle of domestic law, nonconviction-based confiscation;

(iii) Promoting the use of internationally accepted asset-sharing procedures in international confiscation cases, such as the Model Bilateral Agreement on the

Sharing of Confiscated Proceeds of Crime or Property, adopted by the Economic and Social Council in its resolution 2005/14;

(iv) Ensuring that legal provisions in compliance with due process of law, such as banking secrecy laws, do not unnecessarily impede the effectiveness of their systems for countering money-laundering and do not constitute grounds for the refusal of mutual legal assistance;

(v) Granting the widest range of mutual legal assistance in investigations, prosecutions and other judicial proceedings related to money-laundering and confiscation cases;

(vi) Ensuring that the crime of money-laundering is covered by mutual legal assistance agreements for the purpose of ensuring judicial assistance in investigations, court cases and other judicial proceedings relating to that crime;

(vii) Making money-laundering an extraditable offence, in accordance with national legislation;

(b) Establishing new or strengthening existing financial and regulatory regimes for banks and non-bank financial institutions, including natural and legal persons providing formal or informal financial services, thus preserving the integrity, reliability and stability of financial and trade systems through, inter alia:

(i) Customer identification and verification requirements, namely, application of the "know-your-customer" principle in order to have available for competent authorities the necessary information on the identity of clients and their financial transactions;

(ii) Requirements for the submission of meaningful beneficial ownership information for legal persons;

(iii) Financial record-keeping;

(iv) The mandatory reporting of suspicious transactions;

(v) Mechanisms to detect and monitor the cross-border transport of cash and other negotiable bearer instruments;

(vi) Consideration of establishing partnerships with the private sector, including financial businesses, with a view to ensuring sound and effective due diligence procedures to counter money-laundering;

(vii) The introduction of measures to keep centralized statistical data on legal action taken to counter money-laundering;

(c) Implementing effective detection, investigation, prosecution and conviction measures, including:

(i) The establishment of dedicated financial intelligence units to serve as national centres for the collection, analysis and dissemination of suspicious transaction reports and the consideration of existing and affordable information technology solutions to assist financial intelligence units in the analysis of suspicious transaction reports;

(ii) The development of specialized law enforcement techniques, consistent with national legislative frameworks, to support efforts to counter money-laundering;

(iii) The encouragement of specialized training for law enforcement and judicial personnel in techniques for countering money-laundering;

(iv) The consideration, in conformity with domestic legislation, of utilizing confiscated funds to support law enforcement activities, demand reduction programmes and efforts to counter money-laundering;

(v) The development and use of instruments to detect and counter, in a timely manner, emerging methods and techniques for laundering money, including money derived from drug trafficking, from the diversion of precursors and from the abuse of

cyberspace, money transfer systems and payment cards; and the provision of technical assistance for building the capacity of developing countries in this regard, including the development of national detection instruments;

(d) Promoting effective cooperation in strategies for countering money-laundering and in money-laundering cases by, inter alia:

(i) Strengthening mechanisms for domestic inter-agency coordination and information-sharing;

(ii) Strengthening regional and international networks for the exchange of operational information among competent authorities, in particular financial intelligence units;

(iii) Avoiding, to the extent possible, the duplication of data-collection tools related to Member States' obligations with respect to countering money-laundering, as set out in relevant United Nations instruments.