STUDIES

1. Unabridged translations

US long-term yields and forex interventions by foreign central banks

The widening of the US current account deficit resumed from 2002, increasing to over 5 GDP percentage points in 2004, without apparently encountering any difficulties of financing, as shown by the lack of responsiveness of yields to the size of the deficit. This lack of market discipline may stem from the large-scale purchases of US Treasuries by Asian central banks in an attempt to keep their currencies from rising against the dollar. Thus, whereas holdings of US Treasury securities by the foreign official sector only accounted for 10.5% of total outstandings in 1992, this share was estimated to have risen to 27.9% by the end of 2004. Given the widely-recognised statistical limitations resulting from the method of data collection used, these figures should, however, be treated with caution and probably underestimate the exchange rate interventions actually carried out. Nevertheless, they have the advantage of being rapidly available, giving detailed breakdowns and providing a fairly good overview of major developments.

In order to obtain an estimate of the impact of purchases by the foreign official sector on US long-term yields, we use a model estimating long-term yields that includes a variable of purchases of US Treasuries by different categories of foreigners, constructed on the basis of a model developed by CDC-Ixis. We succeed in identifying a fairly large, statistically significant impact of the purchases by the foreign official sector on US long-term yields. The different equations tested suggest that there is a specific impact of purchases by foreign central banks, as no statistically significant relation can be established between US long-term yields and purchases by other categories of investors. If the official sector had not stepped up its purchases of US government securities from 2002 onwards, US interest rates in the second half of 2004 would have been 115bp higher than their actual level. This differential would have reached a maximum of 125bp in the first half of 2004.

This estimate should probably be considered an upperbound. Indeed, many contingent factors that are difficult to quantify had a downward impact on US long-term yields over this period. The coefficient associated with the variable representing foreign purchases of government bonds may therefore capture this impact (expectations of interventions by the Federal Reserve System across the whole of the yield curve, for example) and be overestimated. Various econometric limitations (instability of the coefficient, autocorrelation of residuals) explain, therefore, why these findings should be interpreted with caution.

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The lack of incentive for fiscal policy shifts, due to insufficient market discipline, is often cited in market literature as one of the main causes behind the persistence and widening of the US current account deficit. Indeed, to date, the savings/investment imbalance has not resulted in upward pressure on interest rates in the United States. This lack of market discipline may stem from the large-scale purchases of US Treasuries by Asian central banks in an attempt to keep their currencies from rising against the dollar. However, this effect is rarely quantified precisely. A recent study by the Board of Governors of the Federal Reserve System (Bernanke, Reinhart and Sack, 2004) indirectly estimates this impact by analysing changes in the residuals of a US long-term interest rate determination model that does not include a variable representing purchasing behaviour with respect to government securities. Measured in this way, the impact since 2002 is estimated at between 50bp and 100bp. Yet, given that many non-fundamental factors, such as expectations of interventions by the Board of Governors of the Federal Reserve System across the yield curve, may also have affected the level of interest rates in the recent period, only a direct estimate would make it possible to verify the existence of such an impact and determine its magnitude. Such an attempt was made by Artus (2005), who identifies a fairly large impact; this analysis could be refined, however, given that it examines purchases of government securities by foreigners across the board, without singling out purchases made by central banks.

In order to obtain a direct, statistically robust estimate of the impact of these purchases on US long-term yields, we used a model developed by CDC-Ixis (Iankova, Lefeuvre and Teiletche, 2004), modifying the variable representing the state of public finances and adding a variable representing the purchase of US government securities by different categories of foreigners. Nevertheless, the specific impact of the behaviour of Asian central banks cannot be estimated, insofar as US data provide a breakdown of non-resident purchases by sector (official or private) and by geographical area, but do not allow us to identify, within a sector, the particular contribution of a country or group of countries.

We succeed in identifying a fairly large, statistically significant impact of the purchases by the foreign official sector on US long-term yields. The different equations tested suggest that there is a specific impact of purchases by foreign central banks, as no statistically significant relation can be established between US long-term yields and purchases by other categories of investors. If the official sector had not stepped up its purchases of US government securities since 2002, US interest rates in the second half of 2004 would have been 115bp higher than their actual level. This differential reached a maximum of 125bp in the first half of 2004. This estimate must nonetheless be considered an upperbound. Indeed, many contingent factors that are difficult to quantify had a downward impact on US long-term yields over this period. The coefficient associated with the variable representing government bond purchases by the foreign official sector may therefore capture this impact (expectations of the implementation of a "Plan B" by the Board of Governors of the Federal Reserve System, for example) and be overestimated. Moreover, this relationship can only be demonstrated if the estimation period includes the substantial movements in the mid-1980s in the wake of the conclusion of the Louvre and Plaza Accords. It is therefore possible that the relation between purchases of securities by foreign central banks and US long-term yields is subject to threshold effects, and is therefore non-linear in form.

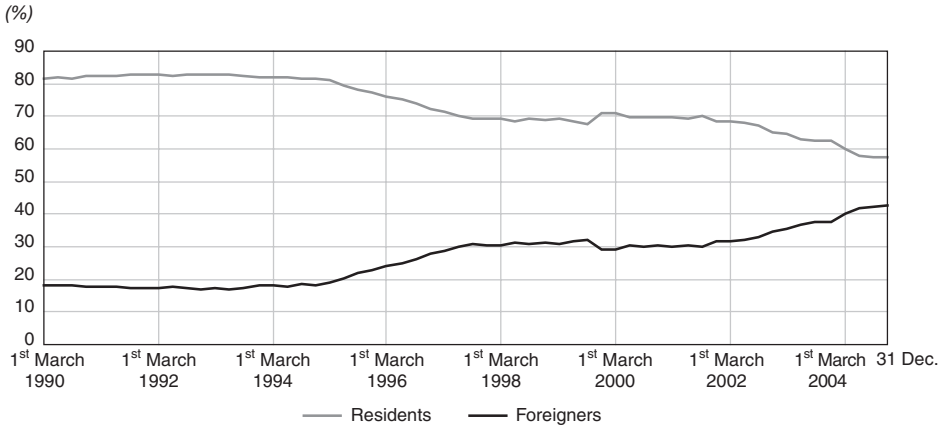
1 Presentation of the model used to directly estimate the impact of purchases of US government securities by the foreign official sector

1.1. The share of the foreign official sector in the financing of the US budget deficit has greatly increased since 2002

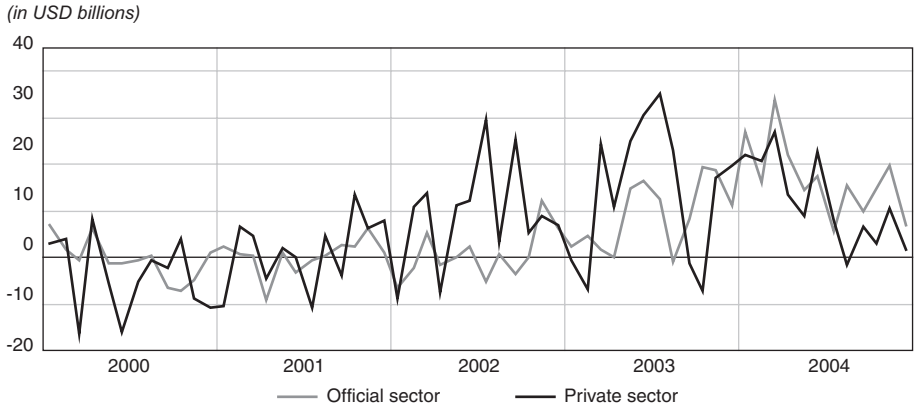
When large-scale purchases of government securities by central banks are part of a strategy that does not appear likely to change in the short term, they may impact the level of interest rates because other market participants consider that these purchases significantly affect supply and demand conditions on the bond market. The fact that central banks do not primarily intervene to generate profit means that they are less sensitive to the level of and changes in yields than private players. An investor will therefore be justified in reducing the risk premium that would have been required had central banks not made these purchases, in the knowledge that these securities can more easily be sold to a central bank, which is *a priori* less yield sensitive.

Up to 1995, the share of foreigners in the financing of the US government deficit remained relatively stable, at around 18%. In 1995, 1996 and 1997, net purchases by foreigners, and in particular those from the private sector, increased sharply before declining from 1998 as a result of US Treasury buybacks of its debt securities. Since 2002, the increase in net purchases by foreigners has resumed, driven this time by the official sector. This trend can mainly be ascribed to the fact that Asian central banks have built up their foreign reserves with a view to curbing the appreciation of their currencies against the dollar. At the end of 2004, holdings of US Treasuries by foreigners represented 42.5% of total outstandings, with 27.9% accounted for by the official sector alone.

Breakdown of US Treasury holdings of residents and foreigners



Net purchases of Treasuries by foreigners since 2001



It should be borne in mind that estimates of purchases of securities by the Treasury International Capital System (TICS) greatly underestimate net purchases by foreigners, and in particular by the official sector. For instance, exchange rate interventions by the Bank of Japan alone, in all currencies, amounted to USD 297 billion between May 2003 and March 2004. Over the same period, net purchases of US Treasuries by the foreign official sector were estimated by the TICS at USD 183 billion, with total net purchases estimated at USD 363 billion. This is nevertheless the most detailed source, covering the broadest area. Appendix 3 gives a more in-depth analysis of the discrepancies in the data.

1.2. Available estimates

1.2.1. Study by the Federal Reserve System: an indirect quantification

While Bernanke, Reinhart and Sack (2004) do not provide a theoretical explanation of the stylised facts they present, they estimate the specific impact of decisions to purchase Treasuries by US and foreign central banks on long-term yields. They focus on the impact of announcements, by sources close to the Federal Reserve System, of possible purchases of long-term US government bonds by the US central bank. These announcements became more frequent in summer 2003, when key interest rates came close to the zero lower bound, thus reducing the Federal Reserve System's scope for further interest rate cuts ("Plan B"). Similarly, the authors assume that purchases by Asian central banks have a decisive impact on US long-term yields. Moreover, they suggest a third reason for the divergence of the level of long-term yields from their fundamental determinants: i.e. the specific impact of the US Treasury's debt buyback programmes that followed the emergence of large budget surpluses in the late 1990s and in 2000.

However, the authors do not directly estimate the impact of these factors on US long-term yields. In practice, they construct a VAR model of the US long-term rate in 5 variables: the employment gap (i.e. payroll employment detrended by an HP filter), actual inflation, expected inflation (taken from the "Blue Chip" Survey), the Federal Funds rate and the year-ahead Eurodollar futures rate. The latter is supposed to reflect the expected path of US monetary policy over the near term.

The impact of the above effects is approximated by studying changes in the residuals of this VAR model at certain key moments: period of large-scale intervention by Asian central banks, statements by sources close to the Federal Reserve System suggesting a possible move to "Plan B", announcement of US Treasury debt buyback programmes, etc. The authors highlight the fact that since the start of the Bank of Japan's policy of stepping up its purchases of US government securities, the VAR model has overestimated ten-year Treasury yields by between 50bp and 100bp.

In order to estimate the impact of Asian central bank purchases, the authors refine their analysis, by regressing the change in Treasury yields to the dollar volume of the Bank of Japan's interventions. However, this analysis was only based on daily observations, from which it is not possible to identify the existence of a significant impact over a longer time horizon. Furthermore, the Bank of Japan's purchases of US Treasuries form only part of purchases by Asian central banks as a whole.

1.2.2. Patrick Artus: a direct estimate based on the level of yields that does not single out the specific role of exchange rate interventions

Patrick Artus (2005) attempts to estimate directly the impact of net purchases of government bonds by foreigners by estimating a model that links the level of ten-year Treasury yields to the Fed Funds rate and to the net purchases of government bonds by foreigners. The following variables were then introduced: nominal GDP growth, the current account deficit, and the government deficit. He found there to be a significant impact of these purchases on the level of yields: an increase of 1-percentage point of GDP (US) in purchases of government bonds by non-residents results in ten-year Treasury yields declining by between 40bp and 90bp. The main shortcoming of this analysis is that it does not distinguish between purchases made by the official and private sectors, or between the geographical origins of purchasers. As a consequence, the potentially specific nature of the impact solely of purchases by central banks is not highlighted.

1.2.3. Roubini and Setser: an estimate based on quantitative market studies and qualitative data

Although the impact of central bank interventions on long-term yields in the United States is difficult to measure quantitatively, the authors estimate that it is fairly significant. They focus on a study by Goldman Sachs (2004) that estimates an impact of 40bp. They believe that the authors of this study underestimated the real weight of foreign central bank purchases of government securities (see Appendix 3) and overlooked a number of second round effects of these purchases. On the basis of these arguments, Roubini and Setser estimate that the impact of net purchases of US Treasuries by central banks is closer to 200bp.

1.3. In our model: adding variables representing purchases of securities by different categories of foreigners

The reference model used was that developed by Iankova, Lefeuvre and Teiletche (2004). It is presented in the form of an error correction equation, due to the non-stationary nature of the variables included.

First, a long-run relation between the level of ten-year yields and that of the three-month rate and the government deficit/GDP ratio is established.

Second, a short-run equation is estimated, linking quarterly changes in long-term yields to the following: an error correction term equal to the lagged residual of a period of the long-run equation, changes in the three-month rate, and changes in the government deficit/GDP ratio and the Purchasing Managers' Index (PMI).

(1) $TX10Y = a + b \bullet DEF/PIB + c \bullet TX3M$

(2) $\Delta TX10Y = d + e\,\Delta\, DEF/PIB + f \bullet \Delta\, TX3M + g \bullet RESID(1)_{t-1} + h \bullet PMI$

See Appendix 2 for a more detailed description of the variables.

The use of the three-month rate enables us to reason in terms of a given monetary policy. The coefficient associated with the short-term rate in the equation is expected to gradually move away from one as the maturity tested lengthens (Wu, 2003). The government deficit/GDP ratio is used because of its impact on the supply of securities; the PMI index, as a variable representing current economic conditions, may influence short-term interest rate expectations or portfolio arbitrage between bonds and more risky assets.

It should be noted that this model does not directly incorporate variables representing expected inflation. The absence of this variable, which is not discussed in CDC-Ixis' paper, may be explained by the fact that both the short-term rate, present in the equation, and the PMI index incorporate information relating to expected inflation.

Moreover, in the light of available literature, it appeared preferable to improve on the indicator of the state of public finances in CDC-Ixis' model, by using the variable representing the expected deficit instead of the actual deficit, as Gale and Orszag (2002) and Sicsic (2003) suggest. As in these studies, we use the average government deficit/GDP ratio estimated by the Congressional Budget Office (CBO) for the following five years as a proxy for the expected deficit. These data are updated and published twice a year, which means that we have to make our estimates on the basis of semi-annual data, whereas the CDC-Ixis model is estimated using quarterly data. In order to offset the reduction in sample size due to the difference in data frequency, we have extended the estimation period to H1 1984-H2 2004, compared with the 1990-2003 period used by CDC Ixis. It does not appear possible to use quarterly public finance projections because international organisations such as the OECD:

• treat the US public deficit as a whole, i.e. state and local government deficits together;

• only use a relatively short predictive horizon (one to two years) and, above all ;

• only update data twice a year.

The switch to quarterly data does not appear to provide any relevant additional information.

We add variables representing purchases of government bonds to this model, distinguishing between those of the private sector/the official sector, and Asia/others. As we saw in Part 1, the US Treasury data that we use here probably underestimate the actual purchases of Treasuries by foreign central banks. However, given that we are focusing here on the impact on a particular point of the yield curve (ten-year yields), and not on the structure of the financing of the current account deficit, it is preferable to use TICS data, as they enable us to isolate purchases of long-term securities (see Appendix 3).

Our model is therefore expressed as follows:

(3) $TX10Y = a + b \bullet DEF^*/PIB^* + c \bullet TX3M + d \bullet PURCHASE - NR/DETTE$

(4) $\Delta TX10Y = e + f \bullet \Delta DEF^*/PIB^* + g \bullet \Delta TX10Y_{t-1} + h \bullet RESID(3)_{t-1} + i \bullet PMI + j \bullet \Delta PURCHASE - NR/DETTE$

It should be noted that we chose to normalise foreigners' government bond purchases by government debt and not, as Patrick Artus did, by GDP. This choice stems from the fact that the government debt outstanding can be used as a proxy for the size of the government bond market.

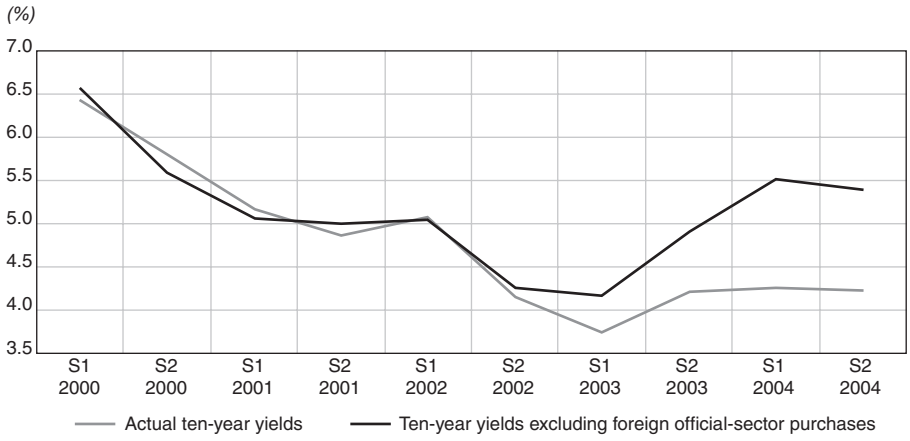
2. Findings: purchases of government bonds by the foreign official sector play a specific role

The results of our estimates, made with different categories of foreign buyers of US Treasuries, can be compared with those of Iankova, Lefeuvre and Teiletche using the table in Appendix 1.

The first difference between our estimates and those of CDC-Ixis can be attributed to the fact that the change in the government deficit estimated by the CBO has a statistically significant impact on the level of and changes in US long-term yields, whereas, in CDC-Ixis' model specification, the actual government deficit only affects the long-run relation.

According to our estimates, only purchases by the official sector have a significant impact on both the level of and changes in yields (see "BdF 1" model in Appendix 1). Purchases by the private sector have an effect on the long-run relation, but not on the short-run relation. Lastly, the purchasing behaviour of Asian investors, both from the official and private sectors, does not appear to have a significant impact on the short- or long-run relation.

Actual long-term yield and long-term yield with purchases by foreign official sector constant (at 1999 level)
Application of BdF1 coefficients



Irrespective of the model used, it appears that US long-term yields are very sensitive to budget deficit projections. In the short term, a 1-percentage-point of GDP revision of the average government deficit estimated for the following five years results in a 30bp to 40bp rise in ten-year yields in the same half-year.

In view of the significant widening of the budget deficit estimated by the CBO over the recent period, from a projected surplus of 0.7 point of PIB in H1 2002 to a deficit of 2.2 percentage points of GDP in H1 2004, and the recovery of the US economy captured by the PMI index, long-term yields should have risen sharply over the past two years. However, this impact was offset by the marked increase in purchases of US Treasuries by the foreign official sector, which had grown from almost zero at the start of 2002 to 2.5 percent of government debt in H1 2004.

Using the "BdF1" model, we made a graphic representation of the level of actual Treasury yields since 2000 and those that would have been observed if the foreign official sector had kept its purchases of US Treasuries constant at their 1999 level. Had the foreign official sector not stepped up its purchases, US Treasury yields would have stood at over 115bp higher than their actual level in H2 2004. The ten-year yield would have stood at 5.4%, which is a level more consistent with fundamentals, and close to a consensus estimate of the US trend rate of nominal GDP growth.

It should nevertheless be noted that the estimate of the coefficient associated with government bond purchases by the foreign official sector is probably skewed to the upside. Indeed, as Bernanke et al. remarked, a number of non-quantifiable factors may have exerted downward pressure on US ten-year yields at the same time as foreign central banks increased their interventions. Moreover, the estimate of the BdF1 model shows that the residuals are strongly autocorrelated (the value for the Durbin Watson test is 1.53), which means that these findings should be interpreted with caution. Lastly, when the estimation period is modified, considerable instability appears in the coefficients. Accordingly, if the years 1985-1987 are excluded from the estimation period – years in which there were substantial movements in

purchases of US Treasuries by the foreign official sector in the wake of the Louvre and Plaza exchange rate accords – the significance of this variable is no longer guaranteed from the point of view of the Student test. The same is true when the years 2002-2004 are excluded from the estimation period. It would appear then that the relation between the purchasing behaviour of foreign central banks and yields is subject to threshold effects and only appears to come into play during periods of significant "activism" on the part of central banks with regard to accumulating reserves.

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Appendix 1

	Lankova, Lefeuvre, Teletche		BdF 1		BdF 2		BdF3	
Long-run relation	Three-month rate	0.60 (17.37)	Three-month rate	0.56 (12.01)	Three-month rate	0.53 (11.03)	Three-month rate	0.56 (9.97)
	Actual general government deficit/GDP	0.34 (11.64)	General government deficit/ GDP ratio estimated by the CBO for the following five years	0.49 (10.25)	General government deficit/ GDP ratio estimated by the CBO for the following five years	0.50 (10.54)	General government deficit/ GDP ratio estimated by the CBO for the following five years	0.47 (9.40)
			Net purchases of government bonds by the foreign official sector/ government debt	-0.51 (-2.59)	Net purchases of government bonds by the private sector/ government debt	-0.46 (-2.93)	Net purchases of government bonds by Asian investors/ government debt	-0.26 (-1.35)
	Constant	2.50 (12.07)	Constant	3.54 (12.87)	Constant	3.73 (12.43)	Constant	3.50 (10.08)
Estimation period		1990Q1-2003Q4		1984H1-2004H1		1984H1-2004H1		1984H1-2004H1
SEE		NC		0.62		0.60		0.66
R2		0.87		0.92		0.92		0.91
Short-run relation	Δ Three-month rate	0.40 (4.40)	Δ Three-month rate	NS	Δ Three-month rate	NS	Δ Three-month rate	NS
	Δ Actual general government deficit/GDP	NS	Δ Expected general government deficit/GDP	0.40 (4.36)	Δ Expected general government deficit/GDP	0.37 (4.47)	Δ Expected general government deficit/GDP	0.35 (3.66)
	PMI	0.06 (5.07)	PMI	0.08 (4.74)	PMI	0.07 (4.47)	PMI	0.07 (4.35)
	Error term	-0.24 (-2.61)	Error term	-0.54 (-4.18)	Error term	-0.57 (-5.07)	Error term	-0.46 (-4.00)
			Lagged endogenous variable	0.26 (2.31)		0.26 (2.33)		0.24 (2.07)
			Δ Net purchases of government bonds by the foreign official sector/ government debt	-0.29 (-2.04)	Δ Net purchases of government bonds by the private sector/ government debt	-0.10 (-0.75)	Δ Net purchases of government bonds by Asian investors/ government debt	-0.04 (-0.32)
	Constant	NS	Constant	-4.09 (-4.84)	Constant	-3.63 (-4.62)	Constant	-3.81 (-4.46)
SEE		NP		0.40		0.40		0.43
R2		0.48	0.61	0.62		0.66		0.53

NS: Non-significant.
NP: Not available.

Appendix 2: Description of the data used

The yield that we set out to explain in the equations, denoted TX10Y, is the average yield on the US ten-year government (Benchmark) bond. We used daily series, provided by Datastream, converted into semi-annual data (average).

The first explanatory variable of the long-run equation, as defined by CDC Ixis, is the US government deficit/GDP ratio, denoted DEF/GDP. The data series used is the general government surplus or deficit series in GDP percentage points calculated by the OECD at quarterly frequency.

The second explanatory variable of the long-run equation is the three-month rate, denoted TX3M, representing the average three-month certificate of deposit rate in the United States. Daily series are also provided by Datastream.

In our long-run equation, we replaced the actual government deficit series by expected government deficits, denoted DEF*/GDP*. Contrary to the previous series, we only took account of federal government deficits, and did not use State or local government deficits. This corresponds to Treasury securities. The expected federal government deficit is the ratio of the sum of the US federal balances estimated by the CBO for the following five years to the sum of nominal GDPs estimated by the CBO for the following five years. These data are published semi-annually in "The budget and economic outlook" reports (January or February projections for H1 data, updates of July or August projections for H2 data). Therefore, expected deficit data updated for H1 and H2 of the same year concern the same five-year forecasting horizon.

We also added, as an explanatory variable, net purchases of Treasury securities with a maturity exceeding one year by different categories of foreigners, denoted PURCHASE-NR. These data are taken from the monthly survey of the Treasury International Capital System conducted by the Department of the US Treasury. The latter provides a monthly estimate of net purchases of Treasury securities by foreigners, which it breaks down between net purchases by the official sector, the private sector and international institutions. It also provides a geographical breakdown of net purchases by country. For reasons of confidentiality , these data cannot be cross-checked. Consequently, we could not isolate net purchases by the Asian official sector. We were thus limited to testing, in the short- and long-run equations, net purchases by Asian residents, the private sector, and the public sector.

The short-run equation includes the same explanatory variables (TX3M, DEF/GDP for CDC Ixis, DEF*/GDP* and PURCHASE in our equations), to which we added the residual of the long-run equation, denoted RESID, lagged by half-a-year, and the PMI index, denoted PMI. The latter is the PMI composite index constructed from data from the ISM monthly survey among purchasing managers in the manufacturing sector in the United States.

Appendix 3: Comparison of the different data relating to net purchases of Treasury securities by the foreign official sector

Data from the monthly survey of the Treasury International Capital System conducted by the Department of the US Treasury are notoriously distorted and inaccurate. Indeed, their limitations are inherent to the way in which this data is collected, i.e. surveys among US financial institutions (banks, securities houses, etc.) on their holdings and transactions of US Treasuries on behalf of foreign investors. The fact financial institutions cannot be forced to participate in these surveys and the confidentiality requirements make it impossible to obtain finer statistics (see D. Sobol, 1998).

These limitations affect the figures as follows:

• in the geographical breakdown, the country taken into account is therefore that where the securities are held and not that where the owner is resident. Therefore the stocks of some countries (United Kingdom, Switzerland, Luxembourg, Cayman Islands, Bermuda) are overestimated (for example, in Luxembourg, according to the TICS, USD 25.4 billion in US Treasuries held in 2003, compared with GDP of USD 27.1 billion) ;

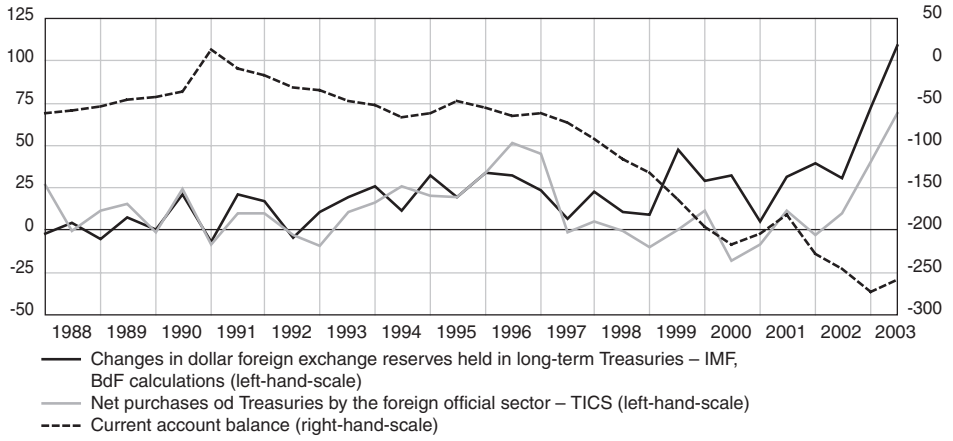
• in the sectoral breakdown, it is the status (official or private) of the non-resident holder of the securities that is taken into account and not that of the owner of these securities. Therefore, securities purchased by foreign private banks on behalf of central banks are classified as private sector purchases ;

• moreover, transactions exclusively between foreigners are not taken into account if a US financial institution is not involved.

As regards securities purchased by central banks, alternative sources exist such as figures published by the IMF in their International Financial Statistics or intervention reports of central banks.

US current account deficit and net purchases of Treasuries

(in USD billions)



Sources : IMF, BIS, US Treasury Department, BEA

By applying the proportion of foreign exchange reserves held in dollars, published in IMF annual reports for each of the years, to the total amount of foreign reserves, published monthly in the IFS, we obtain an estimate of the foreign exchange reserves held in dollars. According to these calculations, changes in global dollar foreign exchange reserves amounted to USD 403 billion in 2003. By way of comparison, the Department of the Treasury calculated that purchases of Treasuries and Agencies by the official sector to be USD 138 billion in 2003. These two sources are nevertheless difficult to compare as foreign exchange reserves include instruments other than long-term Treasuries, such as Agencies, short-term Treasuries and off-shore deposits. According to an estimate by R. McCauley and B. Fung [1] long-term Treasuries accounted in 2000 for 44% of dollar reserves compared with 45% in 1989. By maintaining the latter proportion over the whole period, we obtain a proxy for changes in foreign exchange reserves held in US Treasuries.

Neither the statistics provided by the Department of the Treasury nor estimates based on IMF data yield rigorous results, but the latter nevertheless seem to better reflect the reality, in particular in view of the volume of interventions by the BoJ alone. The orders of magnitude are nevertheless fairly similar and the statistics provided by the TICS cover a broader area and offer a longer time horizon (IMF annual reports only give dollar exchange reserves over 10 years).

Moreover, estimates of annual changes in the proportion of dollar exchange reserves in the BIS annual report differ yet again.

[1] "Choosing instruments in managing dollar foreign exchange reserves" (2003), BIS, Quarterly Review, March.

Transposition of the Directive on financial collateral arrangements

Order 24 February 2005 amending articles L431-7 and following of the Monetary and Financial Code completed the transposition of the Directive on Financial Collateral Arrangements. The financial collateral regime formerly in force in France already complied to a large extent with the Directive. The amendments introduced by the Order focused mainly on two points.

• *The extension of global close-out netting provisions to all transactions between regulated institutions, irrespective of whether or not they involve securities. We may refer to this as real "universal global netting".*

• *The creation, in addition to standard financial collateral arrangements (financial instrument account pledges (CIF), repos, securities lending) of* "sui generis" *collateral that requires no formal acts whatsoever and may give the collateral taker the right to reuse assets provided as collateral, even when such collateral is provided as a security interest. Moreover, following the example of rules governing collateral provided for payment systems, all financial collateral is henceforth exempt from suspensions and questioning that may stem from collective proceedings initiated against the collateral provider. It is also protected from individual proceedings (enforcement procedures) that may be commenced outside collective proceedings.*

France makes partial use of the opt-out clause that is provided for in the Directive, by excluding entities other than regulated institutions from the scope of the Directive for close-out netting or provision of collateral; except when the collateral is created on financial instruments. However, the transposition into French law even exceeds the Directive's requirements because, in addition to the setting up of universal global netting between regulated institutions, assets that may be provided as collateral and benefit from the regime that falls outside the scope of the ordinary law comprise not only financial instruments and cash, but also trade bills and claims.

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The European Directive 2002-47 of 6 June 2002 on financial collateral arrangements was transposed into French law by Order 2005-171 of 24 February 2005.[1] The innovative nature of the French text and the magnitude of the reform largely make up for the14-month delay in the transposition with regard to the schedule laid down in the Directive. The creation of a vast scope for the development of *sui generis* collateral could bring about as much change in the field of financial collateral arrangements as the creation of monetary instruments did in 1985. In much the same way that monetary instruments made it possible to link up the money market and the securities market, the creation of new *"sui generis"* collateral and the possibility to reuse pledged securities should make it possible to bridge the gap created by the traditional dichotomy between standard security financial collateral arrangements (e.g. pledges) and title transfer financial collateral arrangements (e.g. repos).

The compartmentalisation resulting from this dichotomy was perceived as being increasingly restrictive. At the same time, the collateral market has been undergoing substantial change over a number of years, concurrent to that experienced by the underlying financial transactions, to the extent that it has become as important as, and inseparable from, these transactions. It is useful for jurists and market participants to briefly review the collateral market and the risks to which it is exposed (cf. section 1) in order to obtain greater insight into the scope of the provisions of the Directive on financial collateral arrangements on the one hand (cf. section 2) and on the other, the unique nature of its transposition into French law (cf. section 3).

1 The collateral market and the risks it faces

Though they are specifically designed to prevent counterparty risk, standard collateral arrangements are not wholly efficient. Risks persist. These are mainly due to the relative inefficiency of the arrangements in the event of the initiation of collective proceedings following a declaration of bankruptcy. The risks have become all the more significant as financial markets have become increasingly international and the risks of conflicts of law relating to these collective proceedings have multiplied.

1.1. The development of the financial collateral market

The term "financial collateral" is often used in a generic manner to refer to methods for hedging against all types of risks, including market risks such as interest and exchange rate risks. The term covers a motley collection of hedging techniques, financial derivatives, prudential hedging rules, and even complex legal arrangements, known as mezzanine financing and synthetic transactions. Nevertheless, jurists affirm that the term "financial collateral" must be restricted solely to legal techniques aimed at reducing counterparty risk. Counterparty risk

[1] Order 2005-171 of 24 February 2005 simplifies procedures for the provision of collateral and the realisation of financial collateral arrangements (Official Journal No. 47 of 25 February 2005 page 3254 text No. 40).

is mainly a legal risk, because it is conditional on the different parties to a contract meeting their commitments. This counterparty risk is covered either by a third party that takes the place of the debtor of an obligation (personal collateral), or by the pledging by the debtor itself, the "collateral provider",[2] to the creditor, the "collateral taker", of securities or cash or all other property whose legal title is transferred definitively to the latter if the former does not discharge its obligations (real collateral).

1.1.1. Systematic recourse to collateral

Most financial transactions are currently secured by real collateral that guarantees their security and performance. The provision of collateral is a time-honoured practice: pledges date back to Roman times and banks were born with pawnshops and discounting. Admittedly, loans to private individuals are still infrequently backed by collateral, with the exception of housing loans, which are backed by two specific types of collateral: mortgages and creditor's lien. Banks prefer to guarantee their loans to private individuals themselves, in exchange for an increase in their margins. Loans to SMEs, however, are practically all backed by collateral, be it personal (partners' guarantees, comfort letters from parent companies) or real (liens on machinery, equipment and fixtures, on securities of affiliates, repos, reservation of ownership clauses, Dailly assignments, warrants and documentary credit etc.). Interbank credits are, of course, systematically backed by collateral, irrespective of whether they result from intraday overdrafts deriving from the purchase of foreign currency or hedging operations (intraday credits), or from 24-hour or longer loan commitments contracted by institutions with a limited deposit capacity (overnight credits).

Internal regulations on certain markets (margin requirements for hedging net positions on futures markets) or payment or securities settlement systems with which these markets align themselves sometimes impose these hedging transactions. Hedging remains optional on other less volatile markets or when settlements are not carried out *via* payment systems. However, in practice, prudential rules applicable to market operations provide for overall minimum capital requirements (cf. Basel II) and these prudential rules may be complied with by implementing master agreements that provide systematically for the pledging of securities or cash as collateral. Where the law governing these agreements allows it, they may also provide for netting clauses that are triggered as soon as the counterparty defaults (close-out netting). The collateral often represents 100% of the amount of the transactions that it covers, or even more when the takers wish to have a safety margin to guard against fluctuations in the prices of assets pledged as collateral (margin calls).

As a result it is now practically impossible to borrow liquidity without lodging securities as collateral. The hedging of interbank transactions is now the norm and the rare transactions carried out without collateral are known as unsecured transactions.

[2] The collateral provider is not necessarily the debtor.

1.1.2. Minimising formal requirements

The increased use of financial collateral has rendered impractical the formal acts that were traditionally required for such use. In most traditional collateral arrangements, national laws make the provision of collateral subject to a written document, with authenticated signatures, as well as the physical transfer of assets pledged as collateral [for instance by entering them into special accounts] and the notification of third parties *via* the release of a public notice. The realisation of the collateral is often dependent on judicial authorisation, prior notice and increased disclosure requirements, not to mention the costs generated by the stamp duties and other taxes that accompany each of these formalities. These formal acts are often all the more binding because their non-performance may lead to the revocation of the collateral arrangement.

However, in certain Member States including France, legal techniques have evolved and now favour collateralisation techniques that entail fewer formal requirements, to the extent that financial collateral arrangements are often inseparable from the underlying transactions. Thus, the legal technique of repurchase agreements, or repos, in France is inseparable from the loan transaction that it guarantees, because it consists in the purchase of securities (the collateral) in exchange for cash (the loan) accompanied by clauses providing for the restitution of securities after the cash has been reimbursed. In the accounts, the securities are transferred to the asset side of the collateral taker's balance sheet as they are in the case of an outright sale. In certain Member States, pledges have evolved in the same way given that the collateral taker has the right to "reuse" pledged securities, with the difference being that, unlike with repos, the securities continue to be recorded as assets on the collateral provider's accounts. In return, the collateral provider often has a right of "substitution" (the right to exchange securities against securities of equal value) with the result that the pledged securities account is similar to a shared account that all players may dip into at their convenience. Collateral is increasingly realised by setting off the value of the pledged assets against the underlying obligations or any other debts generated *vis-à-vis* the counterparty.

The language used in monetary policy operations reflects the merging of collateral and underlying transactions because central bank credit operations are designated according to the type of financial collateral used. Therefore, the credit operations conducted by the Banque de France within the Eurosystem are called repos (when the collateral consists of transferred securities) or «Dailly» operations (when the collateral consists of transferred private claims) and those of the Bundesbank are referred to as «Lombard» transactions (the German equivalent of Dailly).

Legally speaking, however, cutting back formal requirements nevertheless presents disadvantages: it is very difficult to determine the intentions of the various parties when they carry out certain transactions such as repos: are they sales/purchase transactions or collateral arrangements? The absence of formal requirements for repos make it impossible to characterise the transactions purely on the basis of account movements. Implicit reference to a financial collateral master agreement does not always make it possible to distinguish between the two operations. Interested third parties – judges, creditors and the tax office – have to carry out an intellectual reconstitution in order to opt for one type of transaction rather than

the other on the basis of circumstantial evidence. This puts the case strongly for global netting,[3] i.e. extending the netting of collateral to all financial operations that are liable to be collateralised, which is currently possible under the Directive on financial collateral arrangements.

1.2. The persistence of counterparty risk

The objective of hedging with collateral is to parry counterparty default. The main default event is bankruptcy. In almost all legislations, from reorganisation proceedings in France to the "official receiver" system in the United Kingdom, the initiation of collective proceedings leads to the suspension of payment of the insolvent company's debts. The payment suspension is extended right up to the definitive winding-up of the company and may even be transformed into the rescheduling, and the more or less imposed forgiveness of debt in the event of the partial resumption of business or, in certain legislations, the creation of a new entity to take over the rights of the wound-up company. If it has put in place adequate collateral arrangements, the creditor is in theory protected against the risk of default resulting from the suspension of payments.

Nevertheless, several legislations, particularly those of most European countries, add certain measures to payment suspension that decrease the protection provided by collateral: the four main measures are:

• *The banning of obligation acceleration*, i.e. making it impossible for the counterparty to request that an ongoing contract be terminated because the other party has been declared bankrupt. In the relevant Member States, the banning prohibits the close-out netting of pledged collateral against other reciprocal obligations.[4]

• *The "zero hour" clause:* i.e. the retroactive cancellation of payments (and attendant financial collateral) made on the day of the bankruptcy ruling before bankruptcy was actually declared. This cancellation is automatic, even if creditors are able to prove that they had no knowledge of the impending bankruptcy ruling. The automatic cancellation also concerns the financial collateral, which is considered to be attached to the cancelled payments.[5]

• *The "relation back" period:* i.e. the provision allowing the judge to cancel payments made prior to the court order or decree, which are suspected of giving the payee preference over the other creditors, on a case by case basis, going back up to 18 months in the past in certain legislations. Here too, collateral may be reversed or declared void because it is attached to payments that are considered suspect or also because it is itself considered suspect.[6]

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[3] Hideki Kanda, University of Tokyo: "Financial collateral transactions, what are they?", Insolvency Symposium, ECB 30 September 2003.

[4] In France, obligation acceleration is banned under the rule of continuation of ongoing contracts laid down in Article L621-28 of the Monetary and Financial Code, which allows a court-appointed trustee to oblige a party to continue an ongoing contract.

[5] Cf. in France, Decree 85-1388 of 27 December 1985.

[6] Cf. in France, Article L621-107 of the Code de commerce.

• *The freezing of collateral:* when creditors are unable to realise most of the assets received as collateral, irrespective of whether they are pledges or mortgages, and in the event of the winding-up of the insolvent company, the downgrading of this collateral to the benefit of creditors with reinforced rights of preference.[7]

In practice, only the collateral provided as a security interest, i.e. with no transfer of ownership (mortgages, pledges) is affected by the freezing of collateral. Title transfer financial collateral arrangements are not affected in Member States where such collateral arrangements are recognised. In France, case law thus recognises the title transfer entailed in "cash pledges" and reservation of title clauses. The law has bolstered repurchase agreements by specifying that they are binding on third parties as soon as the securities are delivered.[8] The same is true of the securities lending regime.[9]

However, as these case law solutions and the exceptions allowed under French law are not recognised in all the Member States, in operations involving at least one foreign counterparty, provisions considered to be a matter of public policy in the home country of the foreign counterparty may prevent the realisation of collateral, even when the operation is to be carried out exclusively between accounts domiciled in France. The priority objective of the Directive on financial collateral arrangements is to reduce this risk of incompatibility between the legislations of European Union Member States, firstly by reconciling the various legislations insofar as possible, and secondly, by allowing mutual recognition.

2. The spirit of the financial collateral directive

The financial collateral directive is a component of the Financial Action Plan n°1. It draws on definitions laid down by previous directives; in particular, the directives on the various "regulated" industries (credit institutions, investment firms, insurance undertakings and UCITS) and their mutual recognition within the framework of the European passport. However, it is part of a new generation of directives generated by the Settlement Finality Directive, which transforms the legal environment of the activities it regulates by creating a "bubble" within which these activities will enjoy some legal autonomy.

2.1. The precedent set by the Settlement Finality Directive

The very first Recital of the Directive on financial collateral arrangements pays tribute to the European Directive 98-26 on "Settlement finality in payment and securities settlement systems", of 19 May 1998. This Directive, known as the "Settlement finality directive", is presented here as the first step in "establishing a sound legal framework for payments and securities settlement systems". It is obvious that the authors of the Directive on financial collateral arrangements wish

[7] Cf. in France, Article L621-32 of the Code de commerce.
[8] Article L432-15 of the Monetary and Financial Code.
[9] Article L432-6 of the Monetary and Financial Code.

to link the issue of collateral as closely as possible to that of payments. It is true that the Settlement finality directive provides for a regime that falls outside the scope of the ordinary law applied to payments that are channelled through payment and securities settlement systems (hereinafter referred to as "payment systems"), the "arrangements between three or more participants", which took over from the former clearing houses and through which are currently channelled 98% of interbank payments every day. This Directive in fact makes provision for transfer orders channelled through these systems to be exempt, unlike transfer orders channelled through mere bilateral correspondent banking relations, from the four aforementioned rules in bankruptcy law, i.e. the banning of obligation acceleration, cancellations under the "zero hour" and "relation back" rules and the freeze on collateral. Articles 3.1 and 7 of the Settlement finality directive in fact state that transfer orders channelled through such systems can no longer be challenged *via* the initiation of collective proceedings, provided that they have become irrevocable by being entered into a system[10] before the decision is handed down. Article 9.1 provides for an extension of this protection to collateral provided within the framework of these systems,[11] for example for loans granted by other participants in the system. Articles 8 and 9.2 for their part, set forth two unique public policy rules. For payments (or securities deliveries), the law to which participants in the system have chosen to be subject is legally enforceable against all other laws, including public policy rules, which could for example be brought up by the court of the home country of a foreign participant in the system. When financial collateral is made up of securities, its rights are governed by the laws of the Member State in which the securities are held (whether they are in the form of book entry securities recorded in an account or of paper securities). These two rules, which are called the "law of the system" and *"lex rei sitae"*, respectively, constitute the cornerstones of the mutual recognition of payment systems in Europe.

Access to payment systems is however strictly limited to credit institutions and investment firms and certain government entities. A large number of other industries regarded the possibility of exempting their payments, or at least the collateral provided against these payments, from bankruptcy law as an incentive to participate in such systems. The protective bubble built around payment systems nevertheless aimed at a specific objective, i.e. protection from the systemic risk inherent to payment systems. This protection notably recommends that access to payment systems remain restricted to a limited number of participants. This is why, in 1999,[12] the European Commission undertook "after consultation with market experts and national authorities, to work on further proposals for legislative action on collateral urging further progress in the field of collateral, beyond the Directive 98/26/EC". After two years of work, the Directive on financial collateral arrangements will take up virtually all of the provisions of the Settlement finality Directive, extending them beyond the narrow circle of payment system participants. However, it will also pursue a more ambitious objective: the abolition of the legal formalities governing collateral arrangements and, consequently, the harmonisation of collateral law in Europe.

[10] That is to say, provided that the originator has contracted to refrain henceforth from issuing counter orders.
[11] … and also, protection for all collateral security provided to a central bank, including outside payment systems.
[12] EC Communication of 11 May 1999 entitled "Implementing the framework for Financial Markets: Action Plan".

2.2. The objectives of the Directive

The Directive on financial collateral arrangements has three objectives: abolishing the formal acts entailed in the provision and realisation of financial collateral; protecting collateral takers against bankruptcy and attachment when the collateral is enforced; making the financial collateral regime subject to *lex rei sitae*.

2.2.1. The abolition of legal formalities

Articles 3 and 4 of the Directive require Member States, in their respective legislations, to provide for the setting-up of financial collateral arrangements that are not dependent on the performance of the formal acts governing tradition collateral arrangements.

Paragraph 1 of Article 3 requires the abolition of formal acts with regard to the creation, validity and admissibility in evidence of financial collateral arrangements. References to master agreements, recording and publication formalities, stamp duties and the use of specific delivery instruments (special accounts, "earmarking", etc.) are no longer required and counterparties are no longer obliged to inform third parties of collateral arrangements into which they have entered *via* legal publications. The sole requirement, maintained in Paragraph 2 of Article 3, is that the financial collateral arrangement be evidenced in writing.[13]

With regard to realisation (i.e. when the collaterised debt is not reimbursed by the collateral provider and the collateral taker wishes to either appropriate, sell, or set off the value of the assets pledged as collateral), Article 4 of the Directive requires Member States to abolish formal requirements such as prior notice of the intention to realise, court approval, public auction, price control procedures, etc. Some scope for flexibility is also introduced in the course of the life of the collateral, because the Directive gives security financial collateral providers the right of substitution (Article 8.3.b) and collateral takers that of reuse (Article 5).

2.2.2. Protecting financial collateral arrangements from bankruptcy law and enforcement events

The Directive requests Member States to provide for financial collateral to enjoy the four same types of "immunity" which they would have enjoyed if they had been provided within a payment system.[14] Furthermore, and this is a new addition to existing provisions for payment systems, the Directive states that, even in the

[13] By virtue of the Electronic signature directive of 13 December 1999, this also includes digital records.

[14] Article 7 states that in the event of bankruptcy, Member States shall ensure the close-out netting provision take effect on the condition that the resulting appropriation of collateral be carried out by setting off its value against relevant obligations or any other reciprocal debts or claims even if they do not have any connective links. Article 8.1 of the Directive requires Member States to ensure that in the event of the bankruptcy of a collateral provider, the financial collateral arrangement may not be called into question on the basis of the "zero hour" (8.1.a) or "relation back" rules (8.1.b). Similarly, Article 8.2 requires Member States to ensure that the freezing of collateral in the event of collective proceedings is no longer binding on collateral covered by the Directive.

absence of any bankruptcy procedure, securities and cash pledged as collateral shall not be subject to attachment or any actions to establish title or preserve rights initiated by a third party.[15] Admittedly, protection from these enforcement procedures comes into effect solely in the event of the realisation of the collateral, and more specifically, in the event of close-out netting. Nonetheless, a close-out netting provision is sufficient in itself to extinguish counterparties' reciprocal rights to a collateral arrangement and may therefore be systematically invoked in the event of attachment.

2.2.3. *Lex rei sitae*

Article 9 of the Directive on financial collateral arrangements provides for the same rule of conflict of law as Article 9.2 of the Settlement finality directive: the law governing the collateral arrangement conforms to the law applicable to the relevant securities accounts in which the collateral is held. This means that it is strongly recommended that collateral arrangements be limited to securities held in a single country. For securities located in different countries, separate collateral arrangements should be put in place for the different countries involved in order to avoid conflicts of law.

However, Article 9 of the Directive on financial collateral arrangements is likely, as is Article 9.2 of the Settlement finality directive, to be modified shortly following the ratification by the European Commission and the Member States of the Hague Convention of 13 December 2002.[16]

The three objectives of the Directive on financial collateral arrangements are minimum harmonisation objectives. The Directive does not create a new collateral law that aims to replace national laws, but simply a mutual recognition mechanism based on the smallest common denominator of collateral, circumscribed by the scope of application of the Directive.

2.3. The scope of application of the Directive on financial collateral arrangements

The Directive has a two-pronged scope of application: the personal scope of application (who?) and the material scope of application (what and how?). In addition, two opt-out clauses enable Member States that wish to do so to redefine the borders of the scope.

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[15] Article 7.1.b of the Directive on financial collateral arrangements states that: "Member States shall ensure that a close-out netting provision can take effect in accordance with its terms: (…) notwithstanding any purported assignment, judicial or other attachment or other disposition of or in respect of such rights".

[16] Convention "on the law applicable to certain rights in respect of securities held with an intermediary" signed on 13 December 2002. This international convention provides for the law applicable to the determination of security proprietary rights to be the law governing the securities account agreement and not the law of the country where the relevant account is located. This *lex contractus* is incompatible with the European conflict of law rules laid down in the Settlement finality directive and the Directive on financial collateral arrangements, which provide for *lex rei sitae* (cf. ECB Opinion Con/2005/7 of 17 March 2005 published in the Official Journal of the European Union of 2 April 2005).

2.3.1. The beneficiaries of the Directive on financial collateral arrangements

Article 1.2 of the Directive requests that the personal scope of application be extended to at least two categories of beneficiaries. The first category is made up, as it is in the Settlement finality directive, of public sector bodies (with a few exceptions), specialised payment system operators and credit institutions and investment firms, to which may be added four new groups: financial institutions, insurance undertakings, UCITS and management companies. The second category includes all other legal persons, provided that the other party is an institution belonging to the first category. To sum up, the Directive on financial collateral arrangements is applicable to all legal persons, provided that one of the counterparties is a regulated institution.

However, when transposing the Directive into national law, Member States are entitled to exclude persons belonging to the second category. This opt-out clause, requested by France in the course of preparatory discussions, however has a limited reach, because mutual recognition of financial collateral arrangements set out by the Directive (cf. 2.4 below) does not permit Member States that have opted out in their national transposition to oppose the participation of non-financial legal persons in collateral arrangements that are subject to the laws of another country because the relevant accounts are located in another country (cf. 2.2.3 above). In any case, Member States are entitled to extend the personal scope of the Directive to other categories, for example to natural persons in their dealings with entities belonging to the first category (as is the case in the transpositions into UK and Belgian laws).[17] Should they do so, however, collateral arrangements set up in accordance with the laws of these Member States and that include natural persons shall not be binding on the laws of the countries that have not extended the transposition of the Directive to natural persons.

2.3.2. The contracts covered by the Directive

The material scope of application may be assessed on three levels:

• Underlying obligations: what kinds of obligations benefit from the provisions of the Directive? Pursuant to Article 2.1.f, the Directive applies only to financial obligations. Nevertheless, the definition of financial obligations provided in Article 2.1.f is very broad and appears to cover all obligations under the civil code or common law.

• Assets that can be remitted as collateral: Articles 1.1 and 2.4.a of the Directive require Member States to apply the Directive to all collateral provided in the form of cash (defined in 2.1.d) and in the form of financial instruments (defined in 2.1.e).[18] However, nothing prevents a Member State from extending the Directive to

[17] As could also be the case in France should French lawmakers approve an amendment within this meaning when they adopt the law ratifying the Order of 24 February 2005 (see below).

[18] It must be pointed out, in addition, that a second opt-out clause requested by Finland enables Member States to exclude financial instruments issued by some of the collateral provider's subsidiaries from the collateral arrangements governed by their national law (Article 2.4.b).

other assets. Trade bills, claims or other forms of receivables may also be pledged as collateral, provided that the collateralisation of such assets is not binding on the laws of the Member States that have not provided for such an extension of the material scope.

• Types of collateral involved: still under the terms of Article 1.1, the scope of application of the Directive covers two types of financial collateral arrangements, presented as a *«summa divisio»*: security financial collateral arrangements (defined in Article 2.1.c) and title transfer financial collateral arrangements (defined in Article 2.1.b). Nevertheless, this *summa divisio* authorises the setting up of "bridges" that make it possible, depending on what the counterparties have planned to include in the collateral contract, to move from one category to the other. Article 2.2 of the Directive on financial collateral arrangements thus authorises collateral providers' to substitute collateral, while Article 5 of the Directive gives collateral takers the right to reuse securities, provided that they replace the original financial collateral with equivalent collateral. Rights of substitution and reuse may be exercised without the security financial collateral arrangement being re-characterised as a title transfer financial collateral arrangement.[19]

2.4. The Directive's reach

The Directive on financial collateral arrangements therefore provides for the minimum harmonisation of financial collateral within the European Economic Area (EEA – Europe of 25 as well as Norway, Iceland and Liechtenstein), together with mutual recognition on this minimum. In this, it adheres to the same logic as the Settlement finality directive or the Banking and investment services directives. The Member States are entitled to extend the provisions of the Directive on financial collateral arrangements to other beneficiaries and other types of collateral.

However, these extensions specific to each Member State, shall nonetheless not be binding on the laws of the States that have not provided for specific recognition of such extensions. It should however be noted that mutual recognition is limited to EEA Member States. It therefore does not have universal scope, because the Directive does not oblige Member States to recognise similar collateral arrangements that come under the laws of third party countries.

All in all, it is clear that the transposition of the Directive on financial collateral arrangements can only be based on a variable geometry approach. The relative harmonisation of collateral law in Europe, henceforth enshrined in a common reference text, the "Directive", will facilitate competition between the different legal systems. However, the attractiveness of financial markets will depend on the quality of the transposition, in terms of legal certainty, as well as its degree of liberalism.

[19] This *summa divisio* covers only real collateral, but it is also possible to conceive of the transposition of some of the solutions set forth in the Directive to personal collateral, such as guarantees. The bankruptcy of the guarantee fund would no longer exempt it from honouring the guarantee. In any case, for the time being, no Member State seems to have considered extending the transposition of the Directive to personal collateral such as guarantees.

3. Transposing the Directive into French law

The Directive on financial collateral arrangements had, to a large extent, already been transposed into French law before its adoption; notably *via* provisions governing repos and securities lending, financial instrument account pledges (or CIF pledges) and cash collateral pledge agreements. With the exception of CIF pledges, all these mechanisms corresponded to the broad category of "title transfer financial collateral arrangements" as defined in Article 2.1.b of the Directive on financial collateral arrangements. CIF pledges were the French version of "security financial collateral arrangements" described in Article 2.1.c of the Directive. However, these forms of financial collateral remained compartmentalised, while the Directive provides for substantial flexibility. Therefore, in order not to be outdone by other Member States, which have chosen to build a new legal regime from the ground up, the decision was made to create an *ad hoc* legal regime that makes it possible to circumscribe the field resulting from the transposition of the Directive and the European passport that it institutes for the collateral involved.

3.1. The Directive on financial collateral arrangements had already been largely transposed into French law

3.1.1. Formal requirements for financial collateral arrangements had already been significantly reduced

The formal acts required for the four main types of financial collateral had already been streamlined. Repos, governed by Articles L432-12 and following of the Monetary and Financial Code, supplemented by Decree 94-350 of 2 May 1994, did not require any formalities for their creation apart from delivery;[20] and to benefit from close-out netting only required reference to a master agreement or market convention. The same was also true for securities lending (accounting variant of repos). Similarly, cash collateral pledges set up under case law were not hampered by any formal requirements. By definition, the reuse of securities whose title had been transferred at the time the collateral was provided was not subject to constraints.

Only financial instrument account pledges required a few formalities: the deposit of the securities on an account specifically assigned for pledging, or at the very least earmarking, at the time of creation; the banning of the reuse of pledged securities; and, lastly, prior notice given to the debtor, and even the account holder, at the time of realisation.

[20] Dispossession, or more specifically the traceability of securities provided as collateral, is a condition common to the provision of financial collateral that is maintained by the Directive on financial collateral arrangements (Recital 10). Where electronic transmission is possible, dispossession may be carried out either by pooling, with no specific designation of the securities, or by earmarking with the specific designation of a line of securities).

3.1.2. Enforceability was already extensive, even in the event of bankruptcy

Three of the four types of financial collateral entailed the transfer of ownership whereby the collateral therefore no longer remained in the collateral provider's assets: repos and securities lending under the Monetary and Financial Code, and cash collateral pledges under case law. Consequently, in the event of collective proceedings, these collateral arrangements were exempt from the freezing of collateral under Article L621-32 of the Code de commerce. The only risks remained retroactive reversal under the so-called "zero hour" clause and voidance under the "relation back" rule.

Notwithstanding dispossession, CIF pledges remained in the assets of the collateral provider, and in the event of the provider's bankruptcy, they were affected by the freezing of collateral under Article L631-32 of the Code de commerce as well as by the possibility of retroactive reversal.

Nevertheless, in the event of bankruptcy, collateral takers, particularly when they were credit institutions or investment firms, had the possibility of setting off their obligation to return the assets pledged as collateral against the underlying obligations due from their bankrupt counterparty, and even beyond that, against all other obligations of the latter relative to financial instrument contracts, within the framework of the global netting provided for in the former Article L431-7 of the Monetary and Financial Code.[21] The former version of Article L431-7 therefore already protected repos, securities lending arrangements and financial instrument account pledges from all of the four obstacles or challenges under bankruptcy law provided that the parties to the arrangements met a number of statutory criteria. However the beneficiaries of Article L431-7 corresponded more or less closely to the requirements of the Directive and could therefore carry out multilateral as well as global (i.e. where no connection or equivalence is required between the obligations netted) netting, provided that it involved debts and claims linked to financial instrument transactions.

The possibility of global netting, regularly extended in 2001 and 2003 by the NRE (New Economic Regulations Act) and LSF (Financial Security Act), has often been perceived as a comparative advantage that promotes the setting up of financial collateral arrangements under French law. This possibility of netting was subject, for CIF pledges, only to the prior notification of the debtor and the account holder (cf. 3.1.1 above) and to the reporting of claims, pursuant to general bankruptcy law.[22]

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[21] The doctrine considers in part that only bilateral netting is possible under French law (Article 1289 of the Civil Code) while multilateral netting is only possible when it is expressly permitted by the law, i.e. in this particular case, within the framework of payment systems (L330-1 and 2 of the Monetary and Financial Code) and that of netting between regulated institutions provided for under former Article L431-7, which, in addition to multilateral netting, provides for global netting, i.e. reciprocal claims are no longer required to be liquid and fungible cf. Anne-Valérie Delozière-Le Fur's thesis. "La compensation dite multilatérale", Preface Ghozi, Editions Panthéon-Assas 2003. For another opinion, see Myriam Roussille's thesis on "Compensation multilatérale", directed by Professor J. Beguin, Panthéon-Sorbonne 2004.

[22] It must however be noted that the former Article L431-7 allowed global netting only between debts and claims resulting from financial instrument transactions and did not make it possible to include, within this scope, debts and claims resulting from credit operations that are not backed by securities financial collateral. A special form of multilateral netting, known as balance sheet netting, was in addition set up by virtue of the NRE (New Economic Regulations Act) (cf. Article L311-4 of the Monetary and Financial Code). However, the implementation of this Article was subject to the publication of a Decree, which however never saw the light of day.

As for cash collateral pledges, their completely fungible nature (cash in exchange for cash) had always enabled them to be netted in all circumstances.[23]

It must nonetheless be noted that account pledges were not protected from "claw back rules", i.e. individual proceedings, whether enforceable (attachments) or precautionary (voidance measures). While, in France, individual proceedings are suspended as soon as collective proceedings are initiated, they remain in force in other legislations, and a foreign creditor could initiate individual proceedings to attach the property of a French company subject to court-ordered winding-up or reorganisation proceedings.

3.2. An original transposition contained in a single chapter

Two solutions were possible for the transposition of the Directive on financial collateral arrangements:

The first solution was minimum transposition, consisting in:

• Exempting the parties using financial collateral under the scope of the Directive from the remaining formal requirements when they create CIF pledges or when they wish to realise them, notably, by permitting the reuse of pledged assets.

• Extending the possibilities of global netting between the parties that come under the scope of the Directive to a few new actors such as insurance undertakings, UCITS and management companies.

• Providing for the recognition of similar collateral arrangements created under the laws of other EEA Member States.

The second solution was maximum transposition consisting in the creation of two new forms of *sui generis* security and title transfer financial collateral arrangements limited to the parties that come under the scope of the Directive and benefiting from extensive possibilities with regard to global netting.

French lawmakers opted for a combination of both approaches. This may be superfluous, but has the advantage of making it possible to placate the professionals that are attached to traditional financial collateral instruments, and also to favour legal innovation *via* the creation of new *sui generis* products.

Most of the transposition was carried out under the framework of Chapter 1, Title III, Book IV of the Monetary and Financial Code, and more particularly under Article L431-7 on global netting, which was broken down into five articles. This article on global netting was chosen because its beneficiaries corresponded more or less to those of the Settlement finality directive.[24] In addition, the legal regime

[23] Com. 4 February 2003, BNP-Gauthier Languereau, unpublished.

[24] Underlying obligations however concerned only obligations on financial instruments. Obligations relative to sums of money had to be included. This was done by incorporating the contents of Article L311-4 on balance sheet netting.

of global netting was extended.

Six new articles were created overall, spread over two sections, the first relating to netting and claims and the second to actual collateral arrangements.

3.2.1. Netting (and the simplified assignment of claims)

It is indispensable to examine the first section (Articles L431-7 to L431-7-2), not only because it focuses on global netting but also because it defines the framework of both the personal and material scopes of the collateral regime as a whole.

L431-7-I : the beneficiaries of the collateral regime and the relevant underlying obligations

Personal scope of application: like the Directive, Article L431-7 states that the new text applies only to agreements which have among their parties at least one regulated institution.[25] The distinction between regulated and unregulated entities is therefore maintained.[26]

Material scope of application: like the Directive, Section I refers to "financial obligations". While this concept is not defined, its extremely broad spectrum is revealed in the distinctions made according to whether.

The relevant financial obligations are the result of:

• transactions on financial instruments (L431-7-I-1);

• contracts giving rise to a cash settlement or the delivery of financial instruments (L431-7-I-2);

• or lastly, contracts signed within the framework of payment systems.

In the first case, the framework of financial obligations is relatively narrow because it is confined to securities transactions and corresponds to the material scope of the former Article L431-7.

[25] In addition to credit institutions, investment services providers, public institutions, institutions, persons or entities benefiting from the provisions of Article L. 531-2, and non-resident institutions with a comparable status, Article L431-7 now also covers territorial units, clearing houses and international financial organisations or organisms to which France or the European Union belong. The reference to the institutions covered by Article L531-2 had already been introduced by the Financial Security Act of 1 August 2003. Article L531-2 concerns not only (1°) (a) the French Treasury, (b) the Banque de France, (c) the Overseas Departments Note-issuing Banks and (d) the French Post Office, (2°) but also (a) insurance undertakings, (b) UCITS, (c) intragroup investment services providers, (d) managers of employee savings schemes, (e) companies that combine the two former business activities, (f) occasional investment services providers, (g) financial sales staff, (h) commodity intermediaries, (i) persons trading in futures on all goods or quotas of greenhouse gas emissions. The reference to occasional investment service providers makes it possible for two unregulated institutions to come under the regime of Article L431-7, but only on an occasional basis.

[26] It should be noted that unregulated entities are henceforth limited to non-natural persons. Natural persons may nonetheless be re-introduced when the bill on the ratification of the Order is presented in June 2005.

In the second case, the framework is much broader, because, apart from barter or services without fees, all contracts give rise to cash settlements – referred to as universal global netting. The second framework is limited exclusively to regulated institutions in the strictest sense; this limitation was provided for by the opt-out clause laid down in Article 1.3 of the Directive.

In the third case, the framework is, potentially, even broader (contract without a financial counterpart), but limited to payment system participants.[27]

L431-7-II and III: "universal" global netting

The material scope of application of universal global netting as set forth in the former Article L431-7 is henceforth significantly broader, because it currently encompasses financial transactions that do not involve financial instruments. In fact, the phrase "all contracts giving rise to cash settlements" refers not only to cash collateral arrangements, such as cash pledges, but also all reciprocally binding contracts, whose cause or object consists of a cash payment. Contracts that do not involve any settlement obligation in cash or financial instruments are therefore extremely residual: barter, swaps and exchanges, provided that they involve neither cash payments nor cash margin calls. It should be noted that, to be on the safe side, in order to be sure that no financial collateral that does not include a settlement obligation in cash or financial instruments is exempt from universal global netting, the law makes it possible in Article L431-7-3-IV to set off the value of all financial collateral against the relevant financial obligations *via* universal global netting. This double precaution reflects the lawmakers' wish to make this netting the most broad-based instrument for the offsetting of debts.

The transposition introduces a new dimension in that universal global netting is henceforth protected from the consequences of civil enforcement proceedings and not only from those of bankruptcy, as was global netting in the past.

L431-7-1: simplified assignment of claims is renewed

This disposition, which does not come within the framework of the transposition of the Settlement finality directive, is a throwback to the former Article L431-7. The extension of the material scope of Article L431-7 nevertheless has an inevitable impact on this practice.

L431-7-2: global netting (and assignment of claims) is legally enforceable* vis-à-vis *foreign bankruptcy laws

Article L431-7-2 makes global netting an enforceable rule of public order, even where there are contradictory provisions resulting from foreign bankruptcy laws. The extension of the enforceability to cover foreign bankruptcy laws is the direct consequence of the implementation of a European regime of mutual recognition not only of financial collateral (transposed in Article L431-7-5) but also of global netting as a way of realising this financial collateral. This enforceability applies

[27] For these transactions, Article L431-7 I 2 excludes the institutions referred to in points (c) to (i) of (2°) of Article L531-2.

not only against rights resulting from the laws of other EEA Member States, but also *vis-à-vis* rights resulting from the laws of third countries.

3.2.2. The financial collateral regime

Article L431-7-3-I: protection of "designated" and* "sui generis" *collateral

This new article takes up the distinction the Directive on financial collateral arrangements makes between title transfer financial collateral and security financial collateral.[28] The list of eligible assets is more extensive than the Directive requires.[29] The distinction also covers both the designated and the *"sui generis"* collateral whose regime is laid down in II of Article L431-7-3.

When any of the aforementioned types of collateral is pledged against the financial obligations referred to in I of Article L431-7, it is protected from the consequences of bankruptcy law. The abovementioned financial obligations come under both the personal and material scopes, this means that all the collateral pledged against financial instrument transactions that have among their parties at least one regulated institution enjoys this protection, as does all collateral pledged against transactions resulting in cash payments when such payments are carried out solely between regulated institutions.[30]

In addition, these collateral arrangements do not require any formalities in order to be enforceable against third parties, which means that even when they are designated collateral arrangements that call for specific formal acts, such as CIF pledges, the underlying obligation and the parties to the arrangement must only meet the criteria set out in Article L431-7 for realisation (but not creation) formalities to be waived.

Article L431-7-3-II: waiving formal requirements for* sui generis *collateral arrangements

Section II of Article L431-7-3 introduces a real *"sui generis"* collateral regime based on contractual freedom. Hitherto, purely contractual collateral arrangements that did not refer to any legislative framework "designated contract" and were

[28] This distinction was already set out in the former Article L431-7 but only for designated collateral.

[29] Like indent 5 of the former Article L431-7, this provision extends the categories of assets pledged as collateral significantly beyond the requirements of the Directive. Indeed, receivables, claims and contract rights may be pledged as collateral in addition to cash and financial instruments. "Receivables" are included due to the desire to encompass in this definition all repurchase transactions governed by Article L432-12 of the Monetary and Financial Code (which also cover all "receivables"). The inclusion of "claims" was justified by the need to maintain consistency with the preceding section, which deals with the simplified assignment of claims as well as global netting. Lastly, while the reference to "contract rights", which is completely new, is merely the result of a desire to be exhaustive, it nonetheless opens up very interesting possibilities, to the extent that it seems to enable the possibility of assigning debts without performing any formal acts within the framework of *sui generis* contracts. Only direct rights on tangible or intangible goods (equipment, business, real estate, etc.) are not included in the inventory of rights that may be pledged as collateral. The inventory makes it possible to list all possible real collateral other than collateral on goods, whether it is designated collateral, such as civil pledges and cash pledges governed by the Civil Code, commercial pledges governed by the Code de Commerce, CIF pledges governed by Article L431-4, securities lending governed by Article L432-6, repos governed by Article L432-12, or *sui generis* collateral whose regime is laid down in II.

[30] But excluding those referred to in Article L531-2-2 (c) to (-i) of the Monetary and Financial Code.

exempt from the formal acts imposed by this framework, did not benefit from any protection. Admittedly, Anglo-Saxon-type buy and sell back practices, and even cash pledges based on case law, sales with repurchase options, derived from the broad interpretation of sales with avoidance clauses provided for under the Civil Code, due to the fact that they entailed transfer of ownership, were by and large enforceable against other creditors of the collateral provider and were not subject to the provisions on the freezing of collateral. However, they were not protected from the risk of being called into question due to the "relation back" or "zero hour" rules, and in addition, this contractual freedom was not applicable to security financial collateral, whose scope was totally circumscribed by the provisions relative to civil and commercial pledges, and CIF pledges.

Article L431-7-3-II now makes it possible to set up *sui generis* collateral arrangements that are totally free of formal requirements at the time of creation on assets that are increasingly diversified, while allowing them to enjoy total protection in the event of winding-up or reorganisation proceedings initiated against the provider. This makes it possible to create title transfer collateral not only on financial instruments but also on receivables without having to meet the formal requirements imposed under the "Dailly law", and to protect this collateral, and also cash pledges and sales with repurchase options, from the consequences of bankruptcy. This also makes it possible to pledge financial instruments, negotiable debt securities, receivables, claims and contracts as security interests, i.e. a much broader scope than CIF pledges, while being dispensed from constituting a special or earmarking account.

The only condition imposed by the third paragraph of Article L431-7-3 II is that the identification of the goods and rights involved, the transfer, dispossession of the provider or checking by the collateral taker must be evidenced in writing. Since the reform of Article 1316 of the Civil Code, this writing may be in electronic form, digital traceability therefore meets this requirement.

Nevertheless, these *sui generis* collateral arrangements are subject to one limitation: they may be used only between the persons referred to in 2 and 3 of I of Article L431-7, i.e. public and regulated institutions with the exception of those referred to in points (c) to (i) of 2° of Article L531-2 of the Monetary and Financial Code.

Article L431-7-3-III: the possibility of reusing security financial collateral

This is the final brick that makes it possible to bridge the gap between security financial collateral and title transfer financial collateral. This provision in fact makes it possible for a security financial collateral taker to enjoy the same benefits as those provided for under title transfer collateral arrangements. The only requirement made of the collateral taker is the obligation to transfer back equivalent collateral: the same amount for cash, and identical form for financial instruments, receivables, claims or contract rights.

This provision applies equally to designated (CIF pledges, commercial, and even civil, pledges) and *sui generis* security interests. Consequently, unregulated institutions may reuse designated security interests when they are operating within the framework of I of Article L431-7, i.e. with a regulated institution as a counterparty.

Article L431-7-3-IV: "universal" global netting encompasses collateral

While this provision has not changed from the former regime, it shows more clearly that universal global netting of debts and claims derived from underlying financial transactions (cf. Articles L431-7-II and III supra) extends to the collateral.

Article L431-7-5: financial collateral arrangements conform to the* lex rei sitae *rule

This solution is the direct transposition of Article 9 of the Directive on financial collateral arrangements. It does not take account of the Hague Convention, which proposes a different conflict solution but is yet to be ratified by France and the European Union. This solution is identical to the *lex rei sitae* rule already set out in Article L330-2 for collateral provided within the framework of payment systems.

At the same time, this solution implies the recognition of financial collateral arrangements set up under foreign laws, if they come under the material and personal scopes defined in Article L431-7-3. This *lex rei sitae* is not limited solely to EEA Member States, it has a universal reach, as laid down in Article 9 of the Directive.

Article L431-7-5: the protection of financial collateral extends to foreign bankruptcy laws

This provision, which is partially redundant given the provision set out in Article L431-7-3 I, is the exact counterpart of Article L431-7-2 relating to the protection of universal global netting.

3.2.3. The other amendments made by virtue of the Order of 24 February 2005

The transposition of the Directive on financial collateral arrangements was bound to affect the rights inherited from the other provisions of the Monetary and Financial Code. Three other articles have been amended as a consequence in order to restore the balance between the different types of financial collateral.

Article L141-4 of the Monetary and Financial Code, second indent, relating to the protection of collateral provided to Eurosystem central banks has been modified in order to extend this protection not only to bankruptcy but also to civil enforcement proceedings, following the example of the provisions of Articles L431-7-II and III and L431-7-3-IV on the netting of underlying financial obligations and collateral.

Article L330-2 relating to collateral provided within the framework of payment systems has been amended in order to adjust the level of protection of collateral provided within these systems to the new financial collateral arrangements introduced by Article L431-7. Article L330-2 now refers to collateral provided under the regime of Article L431-7. The level of legal security of financial collateral is therefore identical, whether it is provided outside or within a payment system. Payment systems nonetheless maintain greater security for underlying operations (in this case payment orders), which benefit not only from close-out netting but also from total protection from retroactive reversals under the zero hour clause and the "relation back" rule.

Article L431-4 on CIF pledges has itself been amended in order to resolve two points of interpretation:

• The new text explicitly confirms that not only the securities entered in the pledged account, but also those that are subsequently entered as collateral on the initial claim, come under the pledge regime. It thus confirms the collateral provider's right of substitution, which is in fact required under the terms of Article 8.3.b of the Directive. This right of substitution is maintained for CIF pledges but not for provisions relating to *sui generis* collateral in Article L431-77-3, because the contractual freedom provided by this Article makes it possible to set up this right of substitution, while in CIF pledges – designated contracts – such a right must be authorised by a specific provision.

• The new text also introduces the regime governing the products and proceeds of pledged financial instruments when they are registered and kept by the issuer.

The transposition of the Directive on financial collateral arrangements by the Order of 24 February 2005 was to a large extent anticipated by the New Economic Regulations Act of 15 May 2001 and by the Financial Security Act of 1 August 2003. These two acts made it possible to progressively extend the exceptions to the general law of multilateral netting, first of all to financial instrument transactions carried out within the framework of a single master agreement (close-out netting), and then to the framework of several master agreements (global netting), with various adjustments depending on whether the netting involves only public or regulated entities or also other persons. Currently, this last amendment sets up what may be called universal global netting, which is free from the constraints of master agreements and extends to all financial obligations, including collateral provided on these obligations, while however maintaining, in accordance with the framework put in place by the Directive, the distinction between public and regulated entities and all other institutions.

Simultaneously, the transposition of the Directive on financial collateral arrangements creates an autonomous financial collateral law that is superimposed on traditional collateral law, including the provisions of the Monetary and Financial Code. This autonomous law did not emerge with the Order. It had already began taking shape in the various clauses providing for the protection of collateral *vis-à-vis* bankruptcy law, either by referring to the rules of global netting provided for in the former Article L431-7 (cf. Article L431-6 on securities lending and L4731-12 on repos) or by the "legal bubble" technique initiated by Articles L330-1 and L330-2 on payment systems. This bubble has now been extended to the law on financial collateral and that on financial obligations. The technique is in fact not that new – with the principle of unenforceability of exceptions on cheques and trade bills, the legislative Decrees of 1935 used a similar protection technique. Time will tell whether French legal practice will reap the full benefits of the new opportunities offered by the protection of *sui generis* collateral arrangements and the right of use, or whether it will confine itself to the recognition by the French courts of similar transactions performed under foreign laws.