



## ***SIA Foreign Exchange Subcommittee***

### ***T+1 White Paper***

*July 2002*

Version 6.0

Comments Are Due By 8/15/02

## Table of Contents

1. EXECUTIVE SUMMARY .....	3
2. BACKGROUND .....	5
3. THE CURRENT STATE OF CROSS BORDER TRADING.....	7
4. THE CURRENT PROCESS AND ITS LIMITATIONS.....	14
5. ALTERNATIVES.....	20
6. CONCLUSIONS.....	24
7. FOREIGN EXCHANGE T+1 SUBCOMMITTEE MEMBERS .....	30
8. APPENDIX A CROSS BORDER TRADING STATISTICS.....	31
9. APPENDIX B DESCRIPTION OF THE FX TRADING CYCLE.....	33
10. APPENDIX C FX PROCESS FLOWS .....	38
11. APPENDIX D GLOSSARY OF TERMS .....	43

Comments Are Due By 8/15/02

## 1. Executive Summary

Under the auspices of the SIA, the securities industry is examining implementation of a shortened trade settlement cycle (T+1) for securities settling in the United States. The targeted implementation date is June 2005, with the majority of systems and operational infrastructures expected to be ready by June 2004, to provide the industry with an opportunity to perform testing, evaluation, and modifications prior to the industry live date. The SIA T+1 Foreign Exchange Subcommittee has been tasked with examining the impact this change will have on investors who have to fund U.S. security purchases through a foreign exchange transaction. For purposes of this paper, we shall refer to this group as "foreign investors."

The current process for cross-border securities trading requires a spot foreign exchange (FX) transaction to fund the securities transaction in U.S. dollars. FX spot transactions settle in two days (T+2) and, at current, U.S. securities settle in three days (T+3). Therefore, today, foreign investors can concurrently transact the securities and FX trade knowing that the U.S. currency will be delivered in time for the security transaction to be settled. Under T+1 this would no longer be the case; transacted concurrently, the securities trade would be scheduled to settle before the spot FX transaction required to provide the U.S. dollars to fund the securities trade. To accommodate this settlement mis-match, foreign investors would be required to pre-fund their securities transaction, tap the T+1 or "Tom Next" FX market, or borrow dollars. All of these alternatives have considerations of which investors should be aware; and each places foreign investors at an economic and operational disadvantage relative to their U.S. peers. In addition, the foreign investor may be disadvantaged at the point of repatriation.

After careful consideration, the FX Subcommittee has concluded that absent a radical change in the way U.S. securities and FX trading are conducted, there is little that can be done to mitigate the additional costs and risks to foreign investors. The Subcommittee believes that foreign investors will bear a higher cost and undergo disproportionate process change relative to U.S. -based investors. In addition the Subcommittee believes that liquidity in the markets will have to improve significantly to accommodate an increase in demand for FX on a shorter settlement basis. Lastly, issues arising from time zone differences cannot be taken lightly as they would impose a significant hurdle for the foreign investor in a T+1 environment.

This white paper focuses principally on the impact of foreign investors trading U.S. security trades. However, a number of other financial markets around the world are also considering T+1. The Subcommittee recognizes that if T+1 settlement were established elsewhere, then U.S. based investors would be faced with comparable issues as they invest abroad. The Subcommittee recommends further review to determine if the current array of practical alternatives could put foreign and U.S. investors on the same footing in a T+1 environment. The balance of this paper outlines the thought process that led the Subcommittee to this conclusion.

## 2. Background

In March of 2001, the SIA T+1 Foreign Exchange (FX) Subcommittee was formed to identify and analyze issues pertaining to FX transactions executed to fund U.S. securities settling in the future T+1 settlement cycle. The Subcommittee has examined inefficiencies during the FX trade process and the implications of time zone differences encountered by foreign investors trading U.S. securities settling on a T+1 cycle in the U.S.<sup>1</sup>. The FX Subcommittee's objective is to identify cross border issues related to T+1 and to offer recommendations for more efficient means of FX trade and settlement for inclusion in the SIA's T+1 model.

The FX Subcommittee is comprised of Investment Managers, FX Broker/Dealers, FX Industry Groups, Global Custodians and infrastructure service providers (The members are detailed in Section 7 of this document). The Subcommittee has produced this White Paper in order to solicit feedback and endorsement from industry participants including:

- ‡ Global Asset Managers
- ‡ Vendors supporting the FX business
- ‡ Other SIA T+1 Subcommittees
- ‡ Utility Providers
- ‡ Foreign exchange industry groups, and
- ‡ Other industry participants, including non-U.S. financial institutions

---

<sup>1</sup> Although the FX subcommittee analysis is focused on U.S. securities movement to T+1, other jurisdictions are also considering a move to T+1 settlement. As a result, the subcommittee recognizes that additional issues could arise if T+1 is adopted in other jurisdictions.

The current paper is a draft and the Subcommittee is inviting comments from the industry. Comments and feedback should be addressed to your organization's T+1 Subcommittee representative or may be sent to: [t1project@sia.com](mailto:t1project@sia.com).

Based on the comments received, the FX Subcommittee will continue to analyze and develop alternative recommendations for funding U.S. cross-border securities in a T+1 environment. The FX Subcommittee will be seeking active involvement by international market participants in this endeavor.

Sanjay Vatsa, Chair  
[sanjay.vatsa@ml.com](mailto:sanjay.vatsa@ml.com)

### 3. The Current State of Cross Border Trading

#### *Cross-Border Securities Trading*

While the majority of all U.S. securities transactions originate in the U.S., a sizable subset originates offshore. Data available from the Treasury International Capital (TIC) reporting system shows that in the first nine months of 2001 the gross purchases of long term U.S. securities by foreign investors was \$7.510281 trillion (See Appendix B)<sup>2</sup>. This figure includes \$2.309795 trillion purchases of U.S. corporate stock. Net purchases of long-term U.S. securities in this period totaled \$0.428160 trillion.

Currently, there is no recognized source of data that documents the precise volume of FX traded to cover securities purchases for all U.S. securities. However, one can infer from the figures above that the need for U.S. dollar funding by foreign investors for securities purchases is substantial.

The TIC figures reprinted below illustrate the geographical breakdown of net purchases and sales of long term US securities by foreign investors.

- ‡ 44 percent United Kingdom
- ‡ 22 percent Non-Japan Asia
- ‡ 16 percent Other European
- ‡ 12 percent Caribbean Banking Centers
- ‡ 5 percent Japan
- ‡ 1 percent Other

---

<sup>2</sup> Source U.S. Department of Treasury, Treasury International Capital (TIC) reporting system

<http://www.treas.gov/tic/ticsec.htm>

### ***FX Market Landscape***

While the FX market generally represents one of the most flexible and efficient markets, it is, at times, constrained by certain limitations that make it difficult to trade on a T+1 basis. The following section describes the current contours and conventions in the FX marketplace.

The FX market represents the largest and most liquid marketplace in the global economy serving a wide array of customers. According to the “2001 Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity” issued by the Bank of International Settlements (BIS), daily FX turnover averages \$1.21 trillion per day.<sup>3</sup>

In recent years, FX trade has become heavily concentrated between four primary currencies, the U.S. dollar, the euro, the Japanese yen, and the British pound. The BIS survey indicates that 90 percent of all FX transactions involve the U.S. dollar as one trade leg, 38 percent include the euro, and 23 percent include the Japanese yen. Trades within the so-called “primary currency market,” account for nearly 65 percent of daily turnover with euro-dollar, dollar-yen, and euro-yen trades representing 30, 20, and 11 percent market share, respectively. In contrast, trading local currencies in emerging markets account for less than 4.5 percent of overall FX activity. Consequently, despite the apparent flexibility and depth of the FX market, asset managers funding trades in currencies other than the euro, yen and pound, at times face certain limitations in market liquidity and availability.

---

<sup>3</sup> Bank of International Settlement: “*Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2001.*” Ref no: 31/2001E, October 9, 2001.

### ***The Major Players in the FX Market***

In addition to global asset managers, the FX market includes a wide array of participants including import-exporters, multinational corporations, banks, money managers, asset managers, hedge funds, corporate investors, model funds and national governments. Consequently, trade and settlement conventions for FX must conform to a wide array of diverse customer needs.

According to the 2001 BIS Triennial survey, 58 percent of all transactions are conducted between FX broker dealers, 28 percent involve financial customers including regional banks, hedge funds, and asset managers, and 18 percent involve non-financial customers including corporations and importer-exporters. Market players use FX transactions to manage or fund commercial trades, settle securities transactions, and repatriate dividends and interest.

### ***Current Settlement Conventions***

Transactions include spot, forward, swap, “Tom Next” (tomorrow versus next delivery) and “Cash,” (same day delivery), with the bulk of the market flow concentrated in the spot market. For most currencies, the spot FX market is based on a two-day settlement cycle (T+2). If a customer requires currency in less than two days, he or she can often request a Tom Next or Cash trade for faster settlement. However, these markets have several limitations. Tom Next and Cash trades essentially are short dated FX swaps. Two parties agree on a spot (T+2) price, and then agree on a premium (or discount) to account for the early settlement. This premium or discount is calculated from the interest rate differential between the two underlying currencies for one-day money. This premium, therefore, is a

product of the money markets and not the FX market. Additionally, liquidity in Tom Next and Cash markets normally lags behind the spot market considerably.

As the following section illustrates, the Tom Next and Cash FX markets incur a price premium over spot transactions for several reasons.

### Chart 1 Tom Next Liquidity Survey, February 2002

<b><i>Tom Next Liquidity Survey, March 2002</i></b>				
<b>Currency</b>	<b>Highly Liquid</b>	<b>Mostly Liquid</b>	<b>Semi-Liquid</b>	<b>Illiquid</b>
Euro	13			
Japanese yen	11	1		1
British pound	8	4		1
Swiss franc	3	7	3	
Swedish krona	2	5	6	
Norwegian krone	1	4	6	
Danish krone	1	4	6	
Argentine peso				9
Brazilian real	1		2	7
Mexican peso	6	5	2	
Chilean peso			1	9
Venezuelan bolivar			2	8
Singapore dollar	1	5	4	3
South Korean won	1			9
Taiwan dollar			3	9
Hong Kong dollar	2	6	5	
Thai baht		1	3	9
Indonesian rupiah				12
Philippine peso			2	7
Polish zloty	1	2	3	4
Hungarian forint	1	1	5	4
Czech koruna	1	3	5	2
Turkish lira		2	3	7
South African rand		4	6	
Australian dollar		4		
New Zealand dollar		3	1	

Survey conducted by the Foreign Exchange Committee, March 2002. Survey included 13 large FX broker-dealers active in the New York FX market.

Tom Next trades account for an estimated 10 percent of spot FX transactions (\$38.7 billion in daily turnover)<sup>4</sup> with liquidity concentrated within the major currency trading pairs. Many emerging market currencies are not typically traded on this basis. **Chart 1** depicts the results of a recent survey by the Federal Reserve Bank of New York on Tom Next liquidity in the New York FX market place. The chart illustrates the significant drop in T+1 liquidity outside the primary FX markets. In addition, even within the primary currency markets, Tom Next trades at times are difficult to accommodate during afternoon trading hours given the shortened settlement window. Liquidity may be further constrained in the other markets. Consequently, T+1 trades may involve a higher market premium in periods of limited liquidity. Lastly, Asian customers may be precluded entirely from conducting Tom Next trades for settlement in the U.S. due to time zone differentials (this is further discussed at length in Section 4).

### ***Adoption of New Technologies***

While the flexibility of the FX market has its limitations, the evolution of technology is slowly helping to mitigate these constraints. Like many industries, the FX market is adapting as new technologies are introduced and adopted by market participants. Many of the changes implemented to date have been concentrated in the interdealer or wholesale FX market while the customer-to-dealer FX market has been slow to adopt new technologies. Slowly, however as these new technologies are introduced in the customer market, the efficiency and accuracy of FX trading is improving.

The adoption of electronic trading systems, for example, has already changed the way FX is traded and settled between dealers. Since the mid-1990's FX dealers have executed trades

---

<sup>4</sup> Bank of International Settlement: "Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2001." Ref no: 31/2001E, October 9, 2001.

via electronic interfaces such as EBS and Reuters Dealing. These electronic order book systems automatically match FX buy and sell orders between counterparties represented in the system and provide counterparty trade verification information. However, the customer-to-dealer sector of the FX market has been slow to adopt electronic dealing; customers still usually trade with a variety of different dealers over the phone. In recent years, multi-dealer electronic trading platforms, which offer a single point of access for trading FX, have been successfully introduced in the customer-to-dealer market. These platforms give customers a single portal to trade with multiple counterparties. Dealers report that customers have gradually begun to migrate towards electronic dealing, particularly for small, routine transactions. According to a September 2001 TowerGroup survey, the penetration of electronic trading of FX has grown from 5% in 1999 to 10% in 2001. TowerGroup believes electronic trading will become the market norm, as systems that effectively service each market segment will offer transparent, liquid alternatives to traditional means of trading. TowerGroup forecasts 37 percent of all trading will be executed electronically by the end of 2002, and 66 per cent traded electronically, by 2003.

FX Electronic trading providers are also expanding into support services. Providers are now beginning to offer maintenance of standard routing and settlement instructions as well as SWIFT MT304 custodian settlement notification. These services are expected to continue to expand and accommodate growing demands for real-time processing and shorter settlement cycles.

Still other technologies are under development to address the efficiency of FX settlement process in the inter-dealer market. ‘Continuous Linked Settlement’ (CLS), for example, is a global settlement utility designed to settle the two legs of an FX transaction simultaneously

between member banks. Simultaneous settlement or PVP (payment versus payment) eliminates settlement risk arising from time-zone differences. The CLS infrastructure will be comprised of the settlement and user member institutions, seven RTGS payment systems, liquidity providers, nostro service providers and members' third party customers. CLS settles in central bank funds and provides immediate settlement finality. Initially seven major currencies will be included and four other currencies will be added in 2003 and others at a later stage. CLS will go "live" in the 3<sup>rd</sup> quarter of 2002 and is expected to become the industry standard settlement for eligible interbank FX trades based on the strong support of the G10 Central Bank Committee for Payments and Settlement. CLS plans to allow settlement members (i.e. participating banks) to provide CLS trade access to third party customers shortly after the operation goes "live."

## 4. The Current Process and its Limitations

### *Timing Issues*

The move to T+1 highlights the complications with trading across different time zones. For example, unless markets can operate 24 hours a day, there is no overlapping time when both Asian and Northern American markets are operational. As a result, Asian and North American institutions cannot exchange confirmation messages or settlement instructions on the same day. To better understand the timing limitations on Tom Next and Cash trades, the following section describes a typical “Day in the Life” of a cross border securities transaction focusing on the FX funding component. While this example depicts the purchase of a U.S. security, the Subcommittee notes that the foreign investor is presented with similar issues with the eventual sale of the U.S. security and repatriation of proceeds. (Appendices B and C offer a full description of the FX trade cycle and FX process flows for U.S. securities).

### ***Day in the Life***

In today's environment, securities transactions settle T+3 and FX transactions settle T +2.<sup>5</sup>

**Chart 2** outlines the settlement options within the current settlement cycle conventions.

**Chart 2**

<b>“Day in the Life”</b>	
<b>T+3 environment</b>	<ul style="list-style-type: none"><li>↗ Trade date- Japanese IM executes securities trade</li><li>↗ T+1- IM receives NOE from New York, conducts spot (T+2) FX trade</li><li>↗ T+2</li><li>↗ T+3 FX trade and securities trade settle</li></ul>
<b>T+2 environment</b>	<ul style="list-style-type: none"><li>↗ Trade date- Japanese IM executes securities trade</li><li>↗ T+1- IM receives NOE from New York, conducts Tom Next (T+1) FX trade</li><li>↗ T+2 FX and securities trade settle</li></ul>
<b>T+1 environment</b>	<ul style="list-style-type: none"><li>↗ Trade date- Japanese IM executes securities trade</li><li>↗ T+1- IM receives NOE from New York; <b>IM cannot execute a same day yen trade for same day settlement in the U.S. FX trade would fail.</b></li></ul>

### **T+3 environment**

Currently, a Japanese investment manager (IM) executes a securities transaction on trade date (T). Once the IM receives the NOE (notice of execution), the funding process begins and the IM executes an FX trade either with the custodian or a third party. The NOE is typically received on T+1. If the NOE is received by the IM on T+1, then the IM can execute an FX trade to settle T+2 in either the local market or through a U.S. based custodian. In either case, the securities transaction and the FX transaction will settle on the same day. If the NOE was received on T,<sup>6</sup> the IM could execute an FX trade to settle T+3

---

<sup>5</sup> There are exceptions in the FX market place where some currencies, CAD, MXN settle on T + 1 and others, THB, ZAR settle T + 3.

<sup>6</sup> Depending on firm practices, the security confirmation/affirmation process may trigger the FX execution. Additionally, some firms require the trade allocations verifications to be returned before the funding process may begin.

<sup>6</sup> Currently, the NOE cannot be received on T because there is insufficient time for the confirmation messaging to transmit between Asia and North America, and back again given that there is no overlapping time when both time zones are operational.

in either the local market or through a U.S. based custodian. Again, in either case, the securities transaction and the FX transaction would settle on the same day.

### **T+2 environment**

If settlement was shifted to a T + 2 securities settlement cycle, the following option would be available to the IM: A Japanese IM would execute a securities transaction on T. If the NOE was received on T<sup>7</sup> the IM could execute an FX trade to settle T+2 in either the local market or through a U.S. based custodian. If the NOE were not received on T the IM would have to execute an FX trade to settle on T+1 or possibly Cash if trading in the local market. However, there are several current limitations to trading on a Tom Next or a Cash basis. For instance, there is insufficient time to arrange for settlement in New York for a Cash trade. In addition, the liquidity for Tom Next and Cash trades can be very constrained in the afternoon hours. If available, trading on a Cash basis would include a market premium and the IM may not be willing to pay this additional cost. If trading through a U.S. based custodian, then the only option would be to engage the custodian to execute the FX trade on behalf of the IM to settle T+1. This scenario leaves no room for error in execution, confirmation and settlement of the security or FX transaction.

### **T+1 environment**

In a T+1 securities settlement cycle, a Japanese IM would execute a securities transaction on T. If the NOE was received on T<sup>8</sup>, the IM could execute an FX trade to settle T+1 or Cash. The same issues mentioned above hold true here. If the NOE were received on T+1, the only alternative for the IM would be to execute an FX trade in the local market to settle

---

<sup>8</sup> See note 5.

on a Cash basis. A U.S. custodian cannot execute and settle the foreign side of the Cash trade.

A review of the trading process shows that if the settlement cycle of the securities transactions tightens from T+3 to T+1, the receipt of the NOE on T becomes crucial in order to signal the start of the funding process.

Currently, there are no arrangements in the FX market that can facilitate the delivery of the NOE on T. If the Asian IMs cannot receive NOEs on trade date, then they will need to fund trades through pre-funding or fail. The following tables further illustrate the timing

#### **Security Transaction**

UST	T-1		T			T+1		T+1	T+1
	3:00 AM	9:00 AM	4:30 PM	5:00 PM	7:00 PM	3:00 AM	9:00 AM	3:00 PM	
	Markets Closed	Execution	Final NOE	Allocations	Closed	Closed	Authorization	Settlement	
JST (UST +14 Hours)	5:00 PM	11:00 PM	6:30 AM	7:00 AM	9:00 AM	5:00 PM	11:00 PM	5:00 AM	
	Place Order	Closed	Closed	Closed			Closed	Closed	
	Receive NOE (Security)					Submit Allocations (Security)			

#### **Foreign Exchange**

FX Funding Alternatives	Pre-Fund USD	△ T+1 Transaction Based Funding: Buy USD in US Market (TomNext)
		△ T+0 Transaction Based Funding: Buy USD in Tokyo or U.S for T+0
		△ FX Allocations
		△ FX Confirmation
		△ FX Settlement Instructions (if 3rd Party FX)

implications for both the security and the FX transactions for Asian investors.

### ***Market Practices***

In addition to the timing issues noted above, there are also a number of market practices that inhibit automated trade and settlement. Since FX trade and settlement are not fully automated, operational risks and settlement risks may increase if the demand increases for Tom Next or Cash trades. The following sub-sections outline the issues of current market practices that inhibit automated trade and settlement:

***Lack of a centralized database for standard settlement instructions***

There are systems that provide information on standard settlement instructions. However, the lack of a standardized instruction database has the potential to impact the settlement of the FX transaction in a T + 1 environment. In this shortened settlement cycle, there will be less time for communication and resolution of issues affecting settlement. The establishment of a standard database for SSIs might solve one set of problems for the industry, but will also raise additional concerns with respect to the maintenance of such a database. The Subcommittee noted that currently much of the FX settlement instructions are provided through free form text. The format of FX settlement instructions would first have to be standardized before a centralized database could be useful. With standardization, existing FX matching utilities could be expanded to accommodate settlement instruction match as part of the trade confirmation matching process. The Subcommittee also acknowledges that just in time (JIT) settlement instruction enrichment remains an acceptable approach.

***Manual confirmation processes***

Many IMs still confirm FX trades manually with counterparties. With a shortened settlement cycle, automated confirmation and matching of FX trade details will become an important pre-requisite for back office processing. Many large IMs use SWIFT and matching utilities, but many medium- and small- volume IMs have not found SWIFT cost-justified. These IMs will face increasing pressure to automate their FX processes as T + 1 approaches.

***Investment Manager allocation process***

The IM allocation process for FX trades is sometimes manually intensive and the breakdown of information is not always received on trade date. If there are errors or

omissions, there will not be adequate time to research and resolve to ensure settlement within a T + 1 timeframe. Currently, none of the Virtual Matching Utilities' (e.g. Omgeo, GSTP AG) initiatives address FX transactions related to security trades.

#### ***New account set up***

The process for establishing a new counterparty account is often manual, labor-intensive and under the IM's control. There is a fair amount of due diligence required to set up a new fund. As part of this due diligence, there are legal and compliance requirements, which need to be satisfied. Although this information is usually requested in advance in anticipation of trading, if it is not complete at the time of the trade the account cannot be established and the trade will not settle correctly until the information is all received. Financial details and fund movement will not occur until the account setup is completed. Delay in setting up the account also impacts settlement and the movement of funds.

#### ***Lack of infrastructure for Tom Next Trading***

FX Operations Support currently revolves around a spot settlement cycle. Currently, most firms do not have operations in place to accommodate large volumes of Tom Next trades. To do so, FX providers may be a need to shift personnel to accommodate a higher volume of trade activity in support of a Tom Next market and a review of the current processes to ensure that this type of trading can be supported.

#### ***Lack of common industry standards for STP***

The current systems used in the FX market do not offer fully integrated processing from trade execution to net settlement. This lack of a common industry technology even now affects the ability to achieve straight-through processing and causes delays and process breakdowns. These problems will be exacerbated under T + 1.

## 5. Alternatives

This section is divided into two parts. The first outlines alternatives foreign investors could implement if T+1 were implemented today. The second explores some of the hypothetical solutions that could emerge. The FX Subcommittee has based its overall conclusion on the *Existing Alternatives* section.

### *Existing Alternatives*

The following sections present the alternatives analyzed by the FX Subcommittee in terms of accommodating FX funding of U.S. securities trading in a T+1 environment:

#### ***Pre-fund all cross-border trades with U.S. Dollars***

In this option, the foreign investor holds a working balance of USD sufficient to finance the net of daily purchases over sales in USD. This method is efficient, as virtually all U.S. custodians offer interest on cash balances. Pre-funding ensures investors can trade securities and settle T+1 and allows the IM to manage his or her currency exposure without resorting to the (less liquid) Tom Next market. This method is also the least operationally burdensome of the alternatives.

On the other hand, this method may run counter to the investor or investment vehicle's mandates and guidelines. Holding USD cash balances may be prohibited by the IM's client guidelines or by regulations governing the investment vehicle. In addition, pre-funding may be difficult to manage when trying to time the execution of a specific security trade, and IMs may have difficulty projecting with accuracy the amount of dollars they will need to finance net purchases. Moreover, in the case of investment trusts, managers need to maintain any surplus funds in the local currency (not dollars) in order to have sufficient cash to meet unexpected redemption needs.

More importantly, IM's may find that pre-funding results in idle cash balances, which may affect investment performance. In Japan, for example, many pension fund sponsors (end investors) evaluate investment performance by asset classes that do not categorize foreign currency holdings as separate asset class.

***Cover purchases with FX Tom Next***

In this option the foreign investor executes Tom Next currency trades to cover purchases and sales of U.S. securities. Tom Next trades command a wide bid-offer spread (i.e. liquidity premia) in addition to the routine interest rate differential premia (discounts). While liquidity premia may be reduced if T+1 cross-border funding transactions generate significant volume in the Tom Next market, it is unlikely they will fall below zero. To settle on T+1, it is expected that foreign investors will be put at an economic disadvantage to their U.S. peers, regardless of whether they execute the FX trade themselves, or outsource the trade to a custodian. For this reason, and for the operational limitations discussed at length in Section 4, trading on a Tom Next basis may not be an attractive alternative for all foreign investors. Global IMs, and, in particular Asian IMs opting for this strategy may have to seriously consider moving the execution and support of their U.S. securities management to facilitate support of a U.S. time zone if the added cost of trading T+1 and Cash trades is too high. The Subcommittee recognizes that using a Tom Next market could provide a more advantageous balance sheet treatment than either pre-funding or borrowing.

***Borrow from U.S. Dollar provider***

In this alternative, the foreign investor obtains a line of credit with a bank, which provides USD to cover the net balance of USD security settlements each day. The foreign investor

then trades the security with a T+1 settlement and buys the dollars spot. On T+1, the securities are financed by a loan from a U.S. bank; on T+2 the foreign investor uses the USD proceeds of the spot trade to repay the bank. This alternative offers the benefits of accessing the FX spot market, (i.e., avoiding the Tom Next liquidity premium) and protects the foreign investor from holding excess USD cash balances for extended periods of time (or under funding their account).

Lenders to such a borrowing arrangement will likely require additional collateral, at current market haircuts, to cover market risk along with a secured interest in the assets financed. This alternative may favor large investment managers, as they are likely to command the most advantageous borrowing arrangements with banks. These foreign investors will also have sufficient volume of buys and sells on any given day to generate a net settlements “portfolio effect” and hence a relatively small net daily financing. They can also more easily absorb the additional operational and accounting costs involved.

Then again, this alternative does not solve the potential compliance issue discussed under “pre-funding.” Any investment mandates that prohibit holding USD cash are unlikely to find borrowing USD any more palatable. Initial indications show that there are likely to be even more prohibitions against borrowing than pre-funding. Overall, however, the Subcommittee believes this option may introduce the least risk to the system.

***Extend settlement of security trade to spot or later***

In this alternative, the foreign investor trades the U.S. securities trade on an extended settlement to coincide with a spot FX transaction. Global foreign investors who are unwilling or unable to trade Tom Next or pre-fund will be forced to extend security settlement to coincide with spot settlement. If failing or agreeing to extension of settlement

to T+2 becomes commonplace, the global market will be faced with maintaining a settlement ladder of positions driven by the time zone of the buying or the selling party. The FX Subcommittee also believes that settlement may be further complicated for securities that settle at the DTC but are also eligible to settle in other major depositories still operating on a T+3 basis.

### ***Fail***

In this alternative, the foreign investor opts to fail in a T+1 environment. The Subcommittee fears that if T+1 is imposed on the global investment community, then failing, which, in the U.S. markets is relatively cheap and easy, could become commonplace. Failing is only economically feasible as long as DTC does not impose an “auto borrow-loan” on failing parties, which is typically the most expensive way to borrow stock.

### ***Theoretical Alternatives***

Currently, neither the MUs nor DTCC have offered a concrete solution to the FX problem. DTCC, in its paper Straight-Through Processing – A New Model for Settlement (January 2002) has touched on the need to synchronize payments across settlement systems and introduce multi-currency and netting capabilities – if the netting savings so warrants. The paper notes that this component of the vision is currently speculative and provides little or no detail. There has also been some discussion of creating a linkage between DTCC and CLS – but, so far, there has been no definite commitment or plans.

Facilitating the delivery of the NOE on Trade Date is also another theoretical alternative. The Matching Utility could assist in providing the investment manager with more timely notification of the security trade status.

## 6. Conclusions

### *Overall Conclusion*

The FX Subcommittee believes that T+1 imposes significant hardships and risks on investors beyond the Americas. Under T+1, to participate in the U.S. securities market, foreign investors must choose to either access the Tom Next FX markets, or pursue some form of pre-funding of trades or other borrowing in USD. In all cases investors are put at an economic disadvantage. Further, absent implementation of significant and, most likely costly, process change, there are likely to be situations in which none of these options is feasible. The Subcommittee acknowledges that there is a possibility that some foreign investors could be forced to either fail or extend security delivery until T+2 at a minimum, creating a “defacto T+2” market. The Subcommittee examined the feasibility of an interim move to T+2. The Subcommittee was unable to assess whether the reduction in credit risk achieved by shortening of the settlement cycle by one day would justify the costs incurred to effect such change. Further analysis of this alternative may be warranted if the SIA’s T+1 business case is revised to consider T+2. While foreign investors may implement any number of laudable improvements to FX trade execution, booking and settlement processes, the FX Subcommittee believes that no combination of these efficiency enhancements will fully address the fundamental problem the time zone poses or redress the economic disadvantage to which foreign investors will be subjected under T+1.

Overall, of the choices available, the FX Subcommittee believes that the borrowing USD is the least problematic alternative available to foreign investors. However, the Subcommittee acknowledges that investors must weigh the relative costs of each alternative for themselves.

As advocates for the global investment community the Subcommittee cautions that further work must be done to understand the full impact of the issues raised in this white paper (as detailed below), on any movement to T+1. The Subcommittee suggests specific, empirical answers to the following questions:

- ‡ What is the expected impact T+1 will have on Tom Next on liquidity premia – will this premia approach zero and if so will it be as palatable as borrowing to investors? (In order to assess the Subcommittee needs to survey dealers and understand the materiality of securities-related flows to the FX market).
- ‡ What are the international legal, contractual, or regulatory factors that may prevent foreign investors from borrowing USD cash on a short-term basis to cover settlements or pre-funding in USD?
- ‡ Will lending terms offered by custodians/banks collateral arrangements in order to lend USD on this short-term basis allow foreign investors to remain competitive with their U.S. peers?
- ‡ Will a significant number of securities settle at both DTC and other T+3 depositories such as Euroclear?
- ‡ The additional costs associated with repatriation and its implications need to be further explored.
- ‡ Further examine the Tom Next liquidity constraints and relative costs on a per currency basis.

### ***Process and Behavioral Recommendations***

The prior section notwithstanding, the Subcommittee recognizes that process and behavioral changes may reduce if not eliminate these costs and risks. The following recommendations

to automate and streamline trade and settlement correspond to the process inefficiencies discussed in Section 4.

***Industry Recommendations to enhance STP***

- ‡ The Subcommittee encourages the MUs to provide a matching/communication and settlement facility for FX trades used to fund securities purchases.
- ‡ The Subcommittee encourages the MUs to provide a notification to trigger the FX trade on Trade Date. The “day in the life” section of the 4th chapter notes that unless an Asian IM can receive the security NOE on trade date, they are unable to conduct a FX trade in time for T+1 settlement in the U.S. If the MU provides a notification to trigger the FX trade the trade cycle would be shortened. (However, in order to have the NOE delivered on the security’s trade date, either the Japanese or U.S. operation must still keep their back office operations open overnight given the time differential).
- ‡ The Subcommittee encourages dealers/vendors providing electronic dealing systems to add Tom Next and Cash FX trading conventions onto electronic dealing systems. These dealers/vendors may also wish to clarify time cutoffs for processing FX trades with shorter settlement cycles. (I.e., highlight the latest time that participants can execute Tom Next yen trade). The Subcommittee encourages vendors, custodial and SWIFT service providers to continue to make accessible cost-effective portals to industry messaging platforms.
- ‡ The Subcommittee encourages vendors providing electronic dealing and matching systems to pursue standardization and centralization of settlement instructions.

- ‡ The Subcommittee encourages prime brokers, custodians and banks to begin analyzing terms and mechanics through which they would provide participants with overnight borrowing for purchase of U.S. securities.
- ‡ The Subcommittee encourages foreign, and in particular, Asian investors to weigh the costs and benefits of moving U.S. securities trade execution and middle office support to the North American time zone.
- ‡ The Subcommittee also suggests that there could be a link between the MU and the electronic FX portal systems to automate the trade order cycle recognizing that the matching utilities may offer additional STP utility.

### ***Behavioral Recommendations by Trade Phase***

In addition to industry changes, there are a number of behavioral changes that market participants should consider. The Subcommittee encourages participants, as a pre-requisite to making behavioral changes, to review guidance offered by the Foreign Exchange Committee on sound FX operational practices: “Managing Operational Risks for Foreign Exchange.” Specifically, market participants should review “Foreign Exchange Transaction Processing: Execution to Settlement, Recommendations for Nondealer Participants.”<sup>9</sup>

---

<sup>9</sup> [www.newyorkfed.org/fxc/mopsrisk.pdf](http://www.newyorkfed.org/fxc/mopsrisk.pdf)  
[www.newyorkfed.org/fxc/ops1099.pdf](http://www.newyorkfed.org/fxc/ops1099.pdf)

The following outlines the behavioral changes by trade phase as analyzed by the Subcommittee:

***Order Entry Phase***

- ‡ Link account allocations systems with FX trading systems to speed up execution, confirmation and settlement.
- ‡ Prepare to process higher volume of Tom Next and Cash FX trades; identify willing and price-competitive brokers.
- ‡ Consider the use of automated, end-to-end connectivity with the use of the Internet and alternative trading systems.
- ‡ Automate security confirms to trigger the FX trading process.
- ‡ Assess feasibility of outsourcing FX execution to custodian.

***Trade Agreement Phase***

- ‡ Process confirmations on trade date when possible.
- ‡ Encourage real time processing versus batch processing.
- ‡ Adapt internal systems to provide real-time data on confirm status, capital margins, currency balances, credit, trading positions (& breaks/reconciliation).

***Settlement Agreement Phase***

- ‡ Settlement systems should rely on a centralized static data & SSI database.
- ‡ SSI databases should update on a real time basis for new accounts and changes in SSIs.
- ‡ Increase the use of exception-only processing.
- ‡ Promote the use of standing settlement instructions (SSIs).

***Settlement Phase***

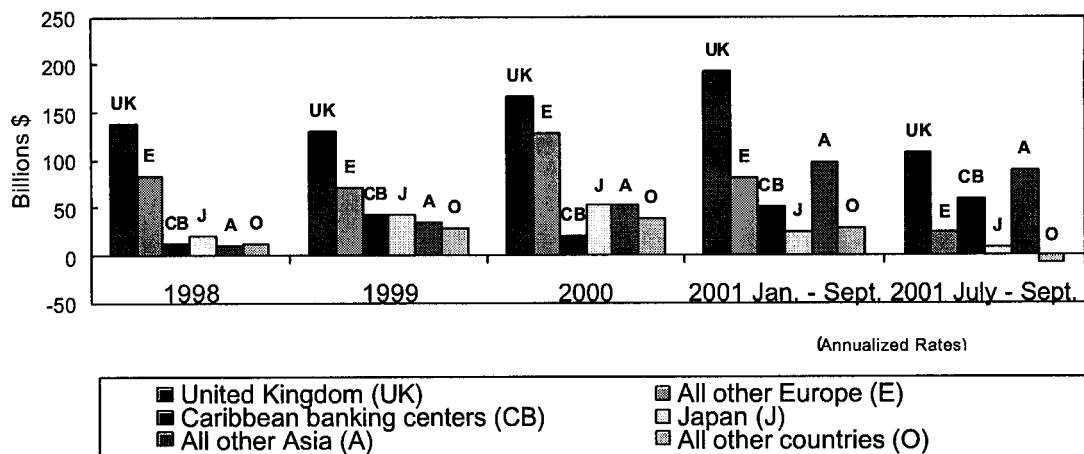
- ‡ Provide cross-currency and same-day value netting capability.
- ‡ Reduce time that is required to identify receipts of the final and/or failed payments by improving internal back-office and reconciliation processes correspondent services.
- ‡ Limit the cancellation deadline to no more than two hours before the opening of the corresponding clearing system.

## 7. Foreign Exchange T+1 Subcommittee Members

Last_Name	First_Name	Company
Balogh	Susan	Goldman Sachs
Davis-Ainspan	Ellie	Lehman Brothers
Dickinson	Lisa	Merrill Lynch Investment Managers
Dunne	Linda	State Street
Everett	Leonora	Capital Guardian Trust Co.
Givens	Lori	Bank of New York Investment Manager Services
Ilaria	Lisa G.	Prudential Securities
Kobayashi	Kazunari	State Street (Japan T+1 Committee)
Kurki-Suonio	Kristina	CLS New York
Leung	Stella	SFC (Hong Kong FXC)
Manganello	Brad	Citibank
McPherson	Roy	EBS
Meyer	Angela	Foreign Exchange Committee
Moore	David	Citibank
Picini	Nicholas	Deutsche Bank
Snyder	Mark	State Street
Suprenant	Anne	Credit Suisse Asset Management
Tebbutt	Barry	Northern Trust Company
Vatsa	Sanjay	Merrill Lynch Investment Managers
Wasserman	Steve	Omgeo

## 8. Appendix A Cross Border Trading Statistics

Chart CM-C -- Net Purchases of Long-Term Domestic Securities by Foreigners, Selected Countries



Country	[In millions of dollars. Source: Office of International Financial Analysis]				
	1998	1999	2000	2001 Jan. - Sept.	2001 July - Sept.
United Kingdom.....	137,970	129,014	166,290	145,019	27,134
All other Europe.....	84,047	71,492	128,577	61,248	5,900
Caribbean banking ctrs <sup>\1\2...</sup>	11,738	43,142	19,883	38,118	14,983
Japan.....	20,261	43,366	52,006	18,724	2,219
All other Asia.....	11,050	34,168	52,151	72,745	22,526
<b>Subtotal.....</b>	<b>265,066</b>	<b>321,182</b>	<b>418,907</b>	<b>335,854</b>	<b>72,762</b>
All other countries.....	12,725	28,979	38,921	21,699	-2,155
<b>Grand total.....</b>	<b>277,791</b>	<b>350,161</b>	<b>457,828</b>	<b>357,553</b>	<b>70,607</b>

\1 Includes Bahamas, Bermuda, British West Indies, Cayman Islands, Netherlands Antilles, and Panama.

\2 Beginning January 2001, Cayman Islands replaced British West Indies in reporting format.

The data on this page represent foreign investors' purchases and sales of long-term U.S. securities (that is, U.S. Treasury and Government agency bonds and notes, and U.S. corporate bonds and stocks) as reported to the Treasury International Capital (TIC) reporting system. Foreign investors also acquired U.S. equities through mergers that involve stock swaps. Net foreign acquisitions of U.S. equities through stock swaps amounted to \$14 billion in 1999, \$20 billion in 2000, and \$7 billion in the first three quarters of 2001. (Stock swaps data for the most recent quarter are Federal Reserve

Board/Treasury estimates and are subject to substantial revisions). These stock swaps are not reported under the TIC reporting system.

The data present aggregate net purchases on an annual basis for 1998 through 2000, as well as activity for the first three quarters of 2001. The figures show that foreigners' annual net purchases (gross purchases minus gross sales) of U.S. securities have maintained an extremely high level since 1998.

Annual net foreign purchases of U.S. securities first surpassed \$100 billion in 1993. In 2000, net foreign purchases of U.S. securities set a new record, surpassing the previous one set in 1997. For the year, net acquisitions (including stock swaps) amounted to \$478 billion, of which over \$300 billion was reported opposite Europe. Net purchases accelerated in the first half of 2001, and even after slowing in the third quarter, are still on pace to surpass last year's record amount.

## 9. Appendix B Description of the FX Trading Cycle

### *The FX Trading Cycle*

The FX process flow falls into three phases, Trade Execution, Confirmation, and Settlement. Accuracy and efficiency are essential in each phase to ensure that FX trades settle quickly and with minimal errors. The entire FX process flow is described in this section.

While many institutions process FX transactions through their own front- and back-office operations, some institutions have chosen to outsource some or all of these functions as a means of improving operational efficiency and STP. This can be particularly attractive to smaller firms.

#### Trade Phase-Order Entry

Customers communicate trade orders to FX dealers via various mediums. The most widely used method today remains verbal communication on recorded phone lines. Increasingly, however, there is a trend in customers choosing to communicate electronically with FX providers. These interfaces can be proprietary end-to-end links with specific providers or vendor solutions that provide multi-dealer access such as Global Link, FxAll, Currenex or Atriax.

The order execution process is the same regardless of whether a trade is executed on the phone or on an electronic platform. A customer submits an FX order to one or more providers, who in turn reply by quoting an exchange rate. After receiving quotes from various providers, the customer selects a counterparty to transact the FX trade. While bilateral agreements and market best practices dictates when an FX deal is consummated,

the FX deal is commonly considered “done” when the customer communicates that he or she agrees to the quoted rate.

If the trade is executed over the phone, the trader will manually enter the financial details of the trade into the trading/sales system. If the trade is executed electronically, typically, the financial details of the trade will automatically feed from the execution platform into the trading/sales system. The financial details recorded by the front-end trading/sales systems include: trade date, time of trade, settlement date, counterparty, currency traded, quantity and price. This trade information flows down to the Confirmation & Settlement systems as well as to the Books & Records of the firm.

At this point, the Operations staff will conduct any necessary bilateral confirmation as well as agree settlement instructions. If a counterpart has standard settlement instructions (SSI), a financial confirmation is all that is needed. If a counterpart has agreed to settlement net, then depending on the value date of a particular trade, the agreement of the net cash movements will act as a financial confirmation for the associated trades. In general, settlement instructions should be agreed no later than one day prior to value. Whenever possible, instructions should be agreed earlier, two days prior to value, as to allow sufficient time to resolve any issues that may arise with the movement of cash. Forward trades should be financially confirmed only on Trade Date and settle confirmed one or two days prior to settlement. This reduces the risk of settling a trade with an old instruction.

#### Confirmation Phase-Trade Confirmation

Counterparties bilaterally confirm transactions to affirm the trade terms, account allocations and settlement instructions. Bilateral confirmation is generally conducted on Trade Date and always before the settlement date of the transaction. Interbank counterparts exchange

SWIFT MT300 messages for each trade. Clients either verbally confirm, or send an electronic message / file or use a vendor solution as a means of bilaterally confirming their trades. The bilateral confirmation data includes: trade date, settlement date, counterparties, currencies traded, buy/sell indicator, quantity, price, and potentially, settlement instructions, and the offices through which they are acting, (Interbank counterparts and technically savvy Client exchange SWIFT messages. Each counterpart generally has a matching engine that processes incoming SWIFT messages on Trade Date or TD+1 and matches them against the individual trades in their systems. Depending on the level of automation within a specific organization, a match will change the state of a trade from unconfirmed to confirmed and where applicable proceed with the settlement process. In lieu of SWIFT, some clients utilize a vendor solution for their matching and confirmation process. For example, CMS, Global Link, etc., are systems that receive feeds from each counterpart, perform the matching process and report the exceptions. With CMS, a client is also provided with net settlement functionality.

In the absence of an electronic means of confirmation, counterparties will financially confirm and settle confirm verbally or via fax or email and in cases where the confirmation is verbal, the client may follow up with a hardcopy confirmation. Although verbal confirmation is still widely used throughout the “buy side” community, we should continue to press for automated solutions to minimize the risk of trade confirmation and settlement errors due to miscommunication. Furthermore, the time frame associated with verbal confirmation tends to be longer than an automated solution settlement process.

### Confirmation Phase--Allocations

In addition to trade terms and settlement instructions, confirmations may include account allocation information. Fund managers and investment advisors frequently trade for more than one underlying fund or counterparty at once. Typically, they transact a single “block” or “bulk” trade, which they then split into a series of smaller trades as they allocate the block trade to the underlying funds or counterparties. These allocations may be communicated to the FX provider soon after the trade is executed or through the confirmation process. Notably, delays in allocation transmissions, or irregular allocations may extend the execution process significantly.

### Settlement Phase

Settlement is the exchange of cash between counterparties on value date. The settlement of FX transactions can involve the use of various secure international and domestic payment system networks.

Settlement occurs and cash is exchanged on the value date of the transaction. For counterparties who do not settle on a net basis, payment instructions and expected receipts are sent to nostro banks for each transaction, one day prior to value. (There are exceptions where instructions are sent to the nostro on value date.) For counterparts who do net settle, one bulk cash payment or receipt across multiple trades is sent to the nostro. The Treasury systems for each counterpart generate estimates of expected cash movements in nostro accounts to help manage liquidity and to help reconcile actual cash movements against each nostro account. All payments are exchanged through these accounts, which are denominated in the currency of the country where they are located.

For example, when a bank enters into a contract to buy U.S. dollars and sell British pounds, it will credit its British pound account in the U.K. and debit its U.S. dollar account in the U.S. The bank will initiate a money transfer to pay the opposing counterparty and a funds movement occurs between the two banks through the local payment system. Hence, creating the potential need for multilateral netting.

It is important to note that settlement risk—the risk that a bank makes its payment but does not receive the payment it expects—is of particular concern for FX trades because of the nature of global trading. Because trade settlement may straddle several time zones, the payment and receipt of cash does not occur simultaneously. Sources of this risk include: hours of operation of the local currency, inter-market payment patterns, rules of the local payment systems and counterparty internal infrastructure. It is for this reason that FX providers will limit trading hours for cross-border spot trades and Tom Next trades as noted above.

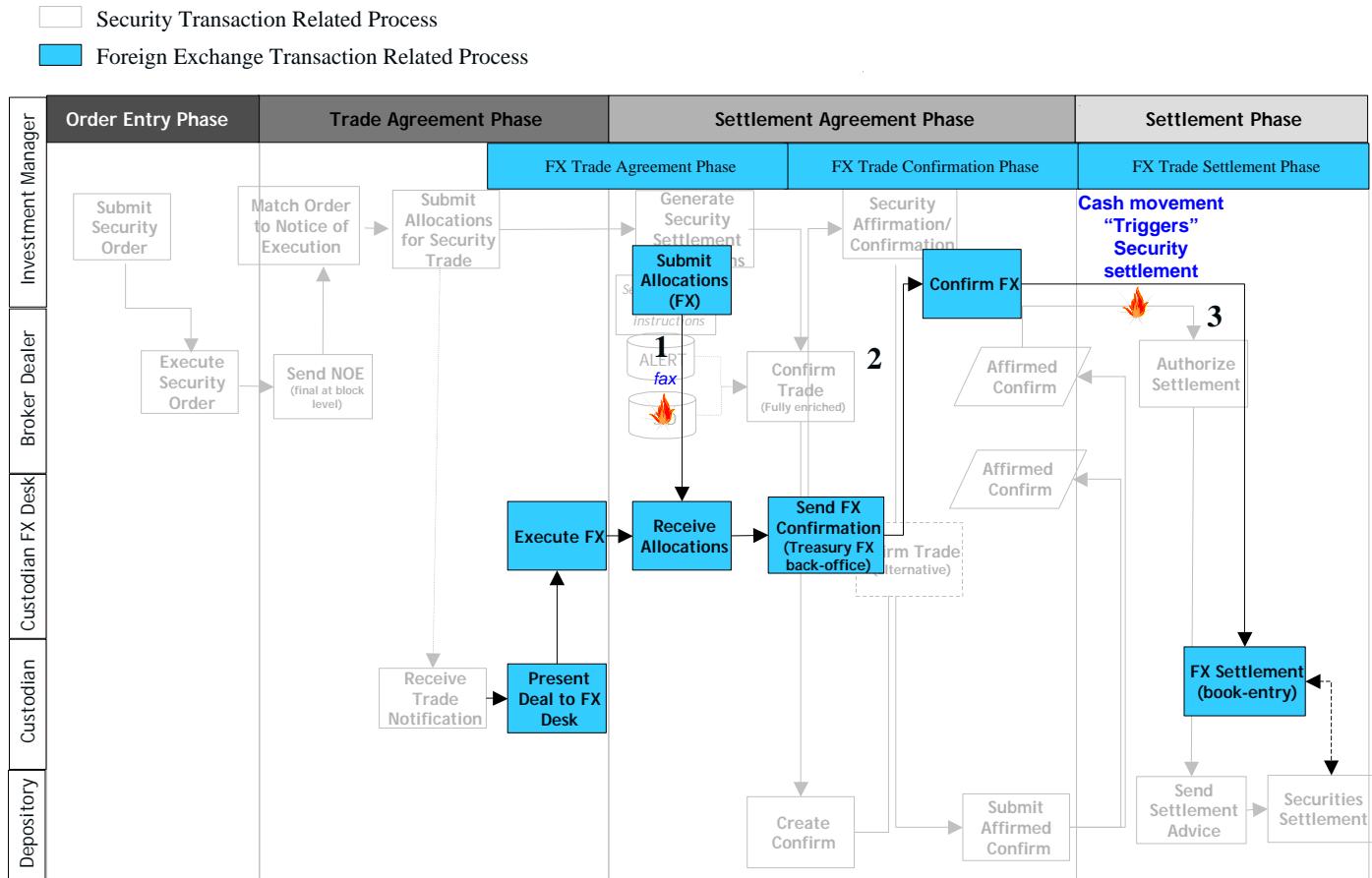
## 10. Appendix C FX Process Flows

Whether the investment managers apply a passive or active funding approach, they have an array of trade options available to them. However, each of these trade options fall into one of three common process flows:

- ‡ Passively traded FX with the Custodian (Figure 1)
- ‡ Actively Traded FX with the Custodian (Figure 2)
- ‡ Actively Traded FX with a Third Party (Figure 3)

We now take a closer look at each trade scenario identifying specific problem areas.

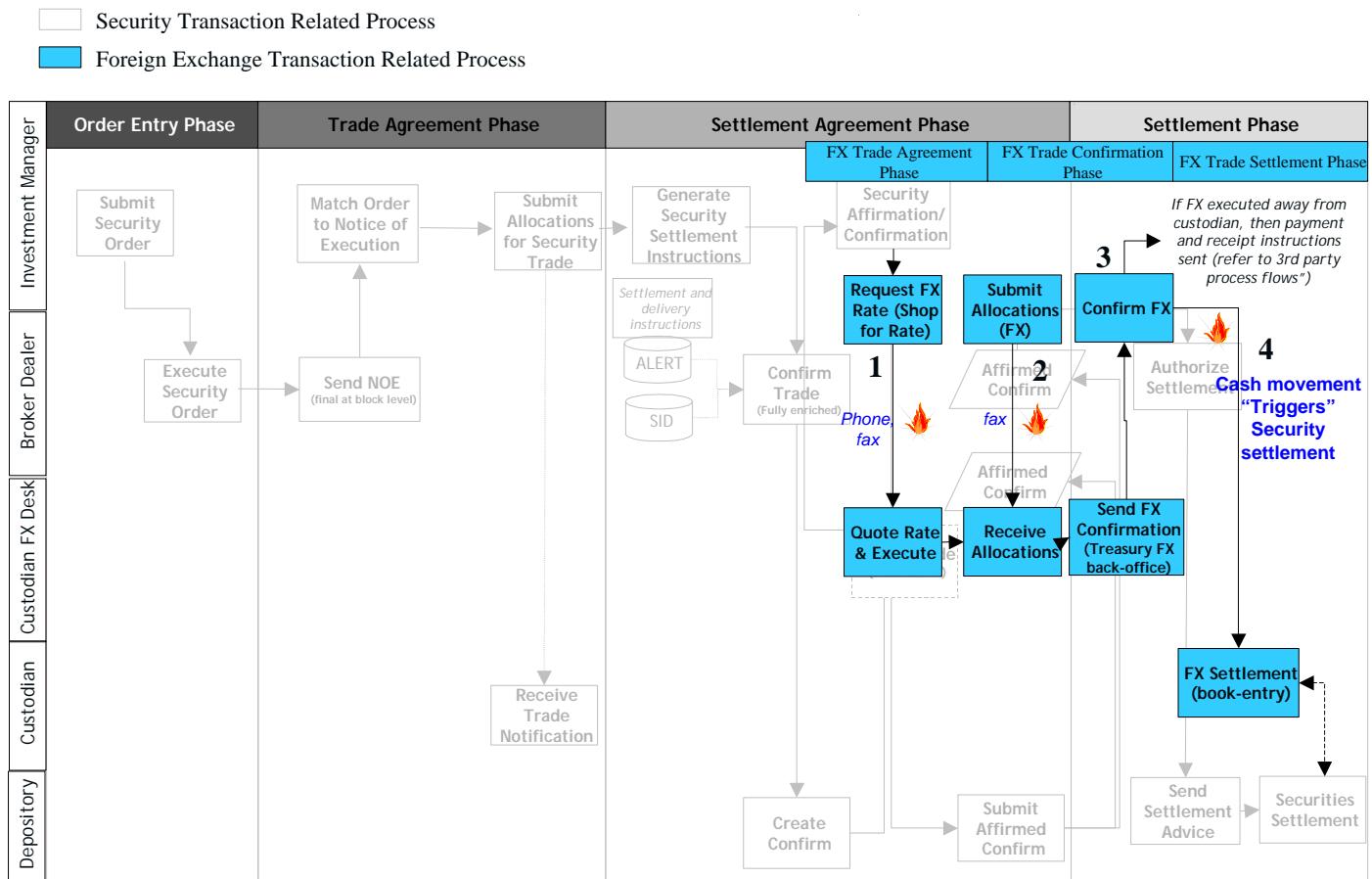
**Figure 1: Passively traded FX Transaction with the Custodian**



A “passive” trade implies that the investment manager has a standing instruction for the FX to be executed at their custodian’s treasury desk. In this type of transaction, the investment manager sends trade instructions to the custodian with notation to transact the underlying FX trade. This usually occurs via a SWIFT message with the notation of “AFXC” or the investment manager’s instructions sent via fax. This type of trade process typically involves smaller transaction sizes.

The process flow above further illustrates passive FX transaction executed with the custodian. Areas in the flow, which illustrate potential issues to be overcome, are shown using a “fireball” symbol. These issues include:

1. Providing the individual allocations
2. Confirming the financial details of the FX trade
3. The movement of currency triggers the delivery of the security

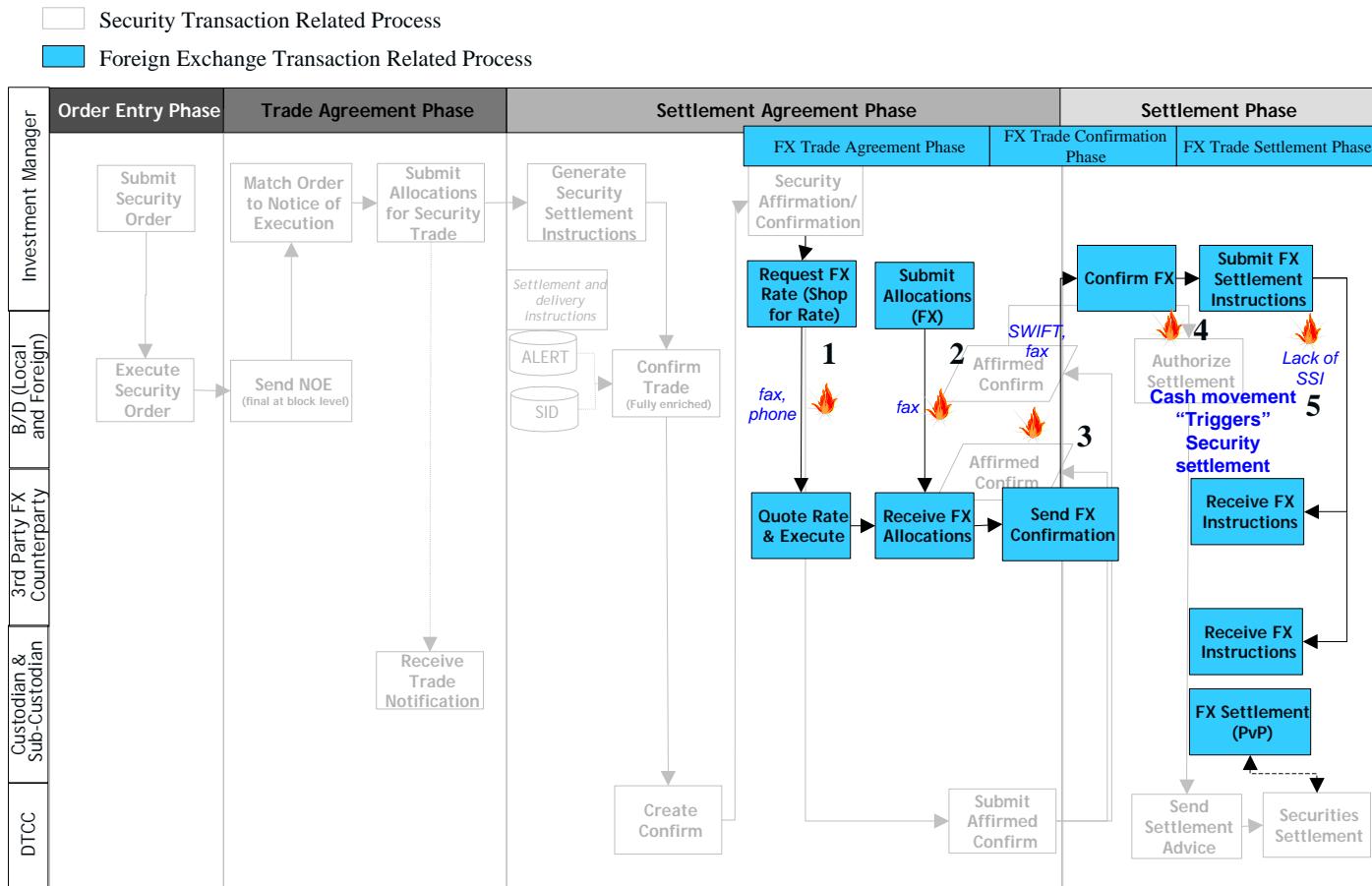
**Figure 2: Actively traded FX Transaction with the Custodian**

This type of transaction denotes an actively managed FX transaction where the investment manager “shops” for the best rate to fund the security transaction. The FX transaction is either done via the FX trading desk at the custodian or via a third party. If the trade is conducted via the custodian, it settles in a book-entry form with no need for settlement instructions.

However, potential issues that may arise in a T+1 environment, as illustrated by the “fireballs” in the diagram, include:

1. Communicating the FX requirement to the FX Trading Desk of the custodian
2. Providing the individual account allocations

3. Confirming the financial details of the FX trade between each counterparties' back offices
4. The movement of currency triggers the delivery of the security

**Figure 3: Actively traded FX transaction with a 3rd Party**

This type of transaction denotes an actively managed FX trade where the IM “shops” for the best rate to fund the security transaction. Usually, these trades involve larger transaction sizes and are often executed as block trades. Third party trades imply that the IM requests the FX transaction after the security trade has been confirmed. However, the IM “shops” the rate directly with FX counterparties and chooses a third party (not the custodian) as the counterparty for the FX trade. This type of a transaction is the same as an actively traded FX with the custodian, but the FX is executed by a 3rd Party and therefore requires settlement instructions.

It is important to note that some Custodian trades also fall within this category. If a block trade is executed with a Custodian but a portion of the sub trades are done away from the Custodian, this type of a transaction is also considered a “Third Party” transaction. The process flow above further illustrates Third Party trades; potential issues that may arise in a T+1 environment include:

1. Communicating the FX requirement to a Third Party
2. Providing the individual account allocations
3. Providing information to set up new accounts
4. Confirming the financial details of the FX trades
5. The movement of currency triggers the delivery of the security

#### ***Securities side of the FX transaction***

The securities transactions that occur alongside the FX transactions mentioned above, all occur in the following manner:

- ‡ The IM submits the order to the Broker-dealer.
- ‡ The Broker-dealer executes the securities trade and sends the Notice of Execution (NOE) to the IM.
- ‡ The IM then submits the allocations for the security trade.
- ‡ The IM also submits the securities settlement instructions to the Broker-dealer.
- ‡ The Broker-dealer confirms the trade and the IM affirms the confirmation.
- ‡ The deliverer authorizes settlement with the depository.
- ‡ The securities trade settles at the depository (versus the FX funds received from the Custodian).

For further details on the proposed securities processing as defined in the ITPC model, please refer to: [http://www.sia.com/t\\_plus\\_one\\_issue/html/t1\\_industry\\_reports.html](http://www.sia.com/t_plus_one_issue/html/t1_industry_reports.html)

## 11. Appendix D Glossary of Terms

Active FX Transaction /Investment Strategy	Denotes an actively managed FX transaction or investment strategy where the investment manager “shops” for the best rate to fund the security transaction. The FX transaction is either done via the FX trading desk at the custodian, where it settles in book-entry form with no need for settlement instructions, or via a third party where settlement instructions are required. Typically, the transactions are large in size.
ADR (American Depository Receipt)	Certificates issued by a U.S. depository bank, representing foreign shares held by the bank, usually by a branch or correspondent in the country of issue. One ADR may represent a portion of a foreign share, one share or a bundle of shares of a foreign corporation. If the ADR's are "sponsored," the corporation provides financial information and other assistance to the bank and may subsidize the administration of the ADR "Unsponsored" ADRs do not receive such assistance. ADRs are subject to the same currency, political, and economic risks as the underlying foreign share. Arbitrage keeps the prices of ADRs and underlying foreign shares, adjusted for the SDR/ordinary ratio essentially equal. American depository shares (ADS) are a similar form of certification.
Allocation	A block trade can be divided among a number of accounts, each face amount for an account represents an allocation
BIC	Bank Identifier Codes are used to identify participants and other interested parties
CAD	Canadian Dollar (currency of Canada)
Cash	FX trading convention for same day settlement.
MT304	“Message Type” 304 refers to the Swift message type for custodian settlement notification for a FX trade
MXN	Mexican Peso (currency of Mexico)
Net by Block by Currency	Refers to the offsetting of the debits and credits for transactions across a block of client accounts (with many sub-accounts). The FX trade is performed for the total amount of currency required for each account (including all sub-accounts); as a result, there are multiple trade settlements. This is usually performed in an active FX investment strategy.
Net by Client	Refers to the offsetting of the debits and credits for FX transactions for a single client. The FX trade is performed for the total amount of currency required for the client (including all accounts); as a result, there is only 1 trade settlement. This is usually performed in an active FX investment strategy.
NOE	Notice of Execution
Passive FX Transaction /Investment Strategy	Denotes a passive investment strategy where the investment manager has a standing instruction for the FX to be executed at their custodian’s treasury desk. In this type of transaction, the investment manager sends trade instructions to the custodian with notation to transact the underlying FX trade. It may be done “automatically” in which the FX

	request is noted on the bottom of the security instruction or via standing instructions for the custodian to perform the FX transaction at the end of the day. Since the FX settles in book-entry form at the custodian, this eliminates the need for settlement instructions. Typically, the transactions are small in size.
Pre-Funding	Denotes that prior to a securities transaction, an investment manager has set aside USD in the relevant account to be used at a later time to fund a security transaction or that the investment manager has offset the proceeds of a USD securities sale
SPOT	T+2 or Foreign exchange trades that settle two days after trade date
STP (Straight Through Processing)	This is an electronic information-networking facility that comprehensively processes financial instrument transactions up to settlement. By means of a single click of the mouse, the trade, the securities-side and the money-side of securities transactions can be processed and settled without any manual intervention
SWIFT	This stands for the Society for Worldwide Interbank Financial Telecommunication. SWIFT, the industry-owned cooperative, supplies secure messaging services and interface software to more than 7'000 financial institutions in close to 200 countries
THB	Thai Bhat (currency of Thailand)
Tom Next	Tom Next or foreign exchange trades executed for next day settlement
Trade by Trade	Transactions where the foreign exchange funding occurs on a trade-by-trade level implying that each cross-border security transaction has an associated FX transaction.
Transaction-Based Funding	An FX trade is performed to coincide with the security purchase and may be done on a trade-by-trade basis, netted by client or conducted as a block FX transaction for one currency at the end of the day. The transaction-based funding may be performed under either Passive or Active FX investment strategies.
ZAR	South African Rand (currency of South Africa)

Comments Are Due By 8/15/02