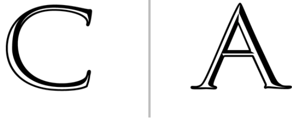

C A M B R I D G E   A S S O C I A T E S   L L C

EMERGING MARKETS DEBT

2002

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ABSTRACT

1. It is difficult to assess current and forward looking valuations for an asset class that has at most 15 years of history, particularly since the historical data incorporate a fundamental shift in the nature of the market from a distressed, equity-like market to a broader bond market. However, at a stripped yield of 568 basis points (bps) over Treasuries as of March 31, 2002, the J.P. Morgan Emerging Market Bond Index Global (JPM EMBIG) is relatively expensive. Emerging markets debt returns have been strongest in periods following yield spreads of over 1,000 bps and have been weakest following yield spreads below 600 bps. Nevertheless, the current 9.7% yield of the JPM EMBIG presents a fair value in today's interest rate environment, as the ratio of the emerging markets debt yield to that of Treasuries of comparable maturity is 2:1, comparable to the historical average. However, even at today's levels, there are sectors of the market that offer compelling value for the risks taken and skilled active managers should be able to pick out today's ugly ducklings that are poised to become tomorrow's swans.

2. While institutional investors have typically participated in emerging markets debt on an opportunistic basis, an argument can be made that it deserves consideration for a permanent allocation. Emerging markets debt provides diversification within emerging markets, as the geographic coverage and the risks and opportunities of emerging markets debt differ from that of the equity. For long-term investors who are able to stomach the volatility of emerging markets through thick and thin, emerging markets equities, while more volatile, have a higher expected return than the debt. The sovereign external debt has historically been less volatile and experienced less downside risk than the equity, but the upside return has also been more limited.

3. The most logical way of obtaining exposure to emerging markets is by investing in both the equity and the debt and rebalancing between the two based on relative valuations. While emerging markets debt has many characteristics of an independent asset class, its correlation with emerging markets equity increases significantly if one takes into account geographical differences between emerging markets equities, which are predominantly Asian, and debt, which is predominantly Latin American.

4. Although there are similarities between the economic basis of returns for the equity and debt, particularly for the deeper distressed debt, in general, correlations tend to be higher when the countries' economies are stable and improving and lower during periods of financial stress. The debt tends to outperform the equity during periods of financial stress because government policies aimed at stabilizing currencies and capital flows (raising interest rates, cutting excess spending, and often provoking recession) improve credit worthiness at the expense of the local business environment. In addition, most of the external sovereign debt is denominated in U.S. dollars, minimizing the currency

risk to U.S. dollar-based investors, while the equities and local currency debt are subject to significant local currency risk. The holders of the U.S. dollar-denominated sovereign debt are subject to currency risk only to the extent of an economic crisis severe enough to push a country into default.

5. Despite its pattern of periodic crises, emerging markets debt has produced stellar returns during its short life, returning an annual average of 14.2%, matching or surpassing all other publicly traded asset classes for the same time period. In addition, despite dramatic downturns during the peso crisis, the Asian crisis, the 1998 Russian default, and the recent default of Argentina, volatility has been 16.3% over that time period. The historical returns reflect the huge compression in spreads from the beginning to the end of the period, and although spreads may continue to balloon periodically in response to crisis conditions, a systematic decline comparable to that of 1990-2002 is not in the cards.

6. Over the past 15 years, the strongest emerging markets debt performance has occurred during the 12 months following a market crisis, with the market rally often led by the very country that caused the sell-off. While many market participants are watching Argentina as a possible strong performer once the crisis stabilizes, the prospects of a broad market rally are limited by the resilience of emerging markets debt outside of Argentina. Although spreads widened during the early stages of Argentina's economic crisis (exacerbated by the events of September 11) the broader market subsequently recovered, decoupling from Argentina. For 2001, Argentina returned -67%, while virtually all other subindexes posted double-digit positive returns. This dramatic shift from past market reactions, when a crisis in one country or region triggered a wholesale sell-off throughout the market that lasted through the end of the crisis, has led some to question whether the upside potential will be more muted today than it has been following past crises. However, it is premature to argue that the market contagion is over, as the crisis in Argentina has not yet been resolved and Venezuela is currently in upheaval.

7. The most liquid, actively traded emerging markets debt is reserve currency (usually U.S. dollars) sovereign paper. However, the growing markets for local currency issues, which are usually short term and both government and corporate, allows investors to diversify within emerging markets debt since these issues are subject to different risks than the longer-term, dollar-denominated sovereign bonds. The benefit of this diversification was particularly well illustrated in 1998 when the sovereign index returned -14.4% because of Russia's default, while the J.P. Morgan Emerging Local Market Index Plus returned 18.4%. This distinction will also be visible in Argentina over time, given the decoupling of peso loans from dollar loans.

8. Emerging markets debt allocations can be implemented through direct investments, managers offering separate account management or commingled institutional funds, or closed-end or open-end mutual

funds. In addition, there are a handful of long-short emerging markets debt hedge funds although their numbers have been greatly reduced since the 1998 Russia crisis. Direct investing requires a level of expertise that few investors possess, making this option inappropriate for all but the most skilled and specialized investors. Managers vary widely from "core" managers, who track the J.P. Morgan Emerging Markets Bond Index Plus or JPM EMBIG closely and take little or no corporate or local market (currency) risk, to "satellite" managers who focus on the equity-like defaulted loans. Local market managers usually focus entirely on income and currency appreciation. Although some high-yield managers have small allocations to emerging markets corporate debt, they generally lack the expertise necessary to evaluate the country and exchange rate risk associated with emerging markets. In addition, corporate credits in the emerging markets are considerably less liquid than are sovereign credits.

9. In theory, an investment in emerging markets would be best implemented by hiring a manager that has skill in both the equity and debt, and invests in each country through the equity and/or debt based on the relative attractiveness of the securities. Such a manager would compare the yield curve to equity valuations to determine whether the equity premium was attractive, and would consider currency and liquidity risks. Managers implementing an emerging markets allocation in this manner might choose to invest in only the debt in African countries, Peru, and Argentina, only the equity in India, and both the equity and debt in Brazil, for example. Unfortunately, not many managers have skill in both emerging markets equity and debt, and those few who appear to be skilled in both areas have no mechanism to compare their valuations.

10. Manager selection can dramatically influence returns in emerging markets debt, as manager performance can vary significantly. Although there is no indexed product available, as such, the major investment banks will create a derivative index product. It is noteworthy, however, that the JPM EMBIG return for 2001 is 1.4% compared to a Cambridge Associates manager median return of 10.8%. Avoiding or substantially underweighting the trouble spots—which managers are skilled at identifying in advance—creates significant room to add value to the index. For example, only two of the 24 active managers in our database had returns below 5% for 2001 largely because most of them underweighted Argentina.

SUMMARY

Background

In the late 1970s, lending to emerging markets countries seemed like the best business in the world. A glut of petro-dollars had to be invested, while Latin American, Eastern European, and African countries needed capital. With returns to bank lenders as high as prime rate +2.5% per annum (plus, in some instances, withholding tax receipts worth another 1% to 2% per annum) and additional up-front fees for syndication, money center banks were only too happy to broker the capital flows. Lenders were convinced that the returns were sufficient for the risks—a view propagated by the oft-quoted statement attributed to Walter Wriston of Citibank that sovereign nations "cannot default." For their part, borrowers were relieved to be able to finance themselves beyond their ability to raise taxes or float debt domestically. By 1982, Brazil, Mexico, and Argentina alone had accumulated approximately $225 billion in external long- and short-term debt. Shortly thereafter, Mexico led a parade of Latin American and middle-European countries declaring their inability to generate sufficient reserve currency to service the external debt. The process of restructuring began.

By 1985, as the global banking community muddled through the first stages of restructuring, a small secondary market in sovereign loans and trade paper had developed. The sellers tended to be regional banks who had participated in syndicated bank loans, but had no long-term strategic interests overseas, or larger banks looking to realign their exposure. The buyers were a small group of bankers, primarily with backgrounds in Latin American corporate finance and Eastern European lending, who originated what is now the "sales and trading" business within commercial banks. They were drawn to the deeply discounted (25% to 80%) equity-like paper and the prospects for creating structured products.

By 1993, volume in emerging markets debt had reached $1,978 billion, aided by the gradual securitizing of the loans, formal debt-to-equity programs, and additional end uses for the paper. From 1990 to 1995, much of the outstanding debt was securitized through the Brady Plan, turning a small-loan-based market into a broader, more liquid market accessible to institutional investors. Named for U.S. Treasury Secretary Nicholas Brady and based on a voluntary debt exchange J.P. Morgan had arranged for Mexico in 1988, the Brady Plan provided for existing loans to be exchanged for eurobonds. The following are examples of the dizzying array of names for emerging markets debt instruments, which often relate directly to the restructuring options:

- "Discount Bonds" were the result of loans tendered at a discount (typically 35%) to par value paying a floating market rate, usually LIBOR-based.
- "Par Bonds" were the result of loans tendered one-for-one for fixed-rate bonds with a below-market fixed rate.

- "PDI Bonds" replaced past due interest.
- "New Money Bonds" were offered for net new capital and typically had a higher yield relative to the other Brady options as well as a shorter duration as an incentive to lend additional capital.

The acceptance of sovereign debt has increased in recent years, as evidenced by the lengthening maturities of much of recently issued debt. In part, the growing comfort with emerging markets debt has been facilitated by the financial assistance provided by developed nations and institutions like the World Bank and International Monetary Fund (IMF) to developing countries. For example, the United States and IMF provided an assistance package to Mexico in 1995 with the IMF, United States, World Bank, and others providing loans totaling more than $40 billion. Mexico repaid the U.S. Treasury three years early (the Treasury made a profit of $580 million on the deal), showing the world that assistance programs to Latin America are no longer charitable write-offs. The developed world responded in similar fashion to assist Russia in 1998. Nevertheless, aid will likely not be dispensed equally to all comers, as demonstrated by the U.S. Treasury's recent decision not to provide support to Argentina.

Market Characteristics

Delineating the characteristics of emerging country debt is complicated by the definition of emerging markets itself. The term "emerging markets debt" can include almost any sovereign debt with a rating below investment grade and may even include investment grade credits in countries that meet the World Bank definition of "emerging" based on income per capita or GDP. As such, the market includes instruments as varied as BBB, collateralized eurobonds and defaulted bank-debt trading at $0.15 on the dollar, in countries as disparate as Mexico and Bosnia. The geographic regions cover Asia, Africa, the Middle East, Central Europe, Latin America, and the Caribbean. The debt is denominated in either reserve currencies or local currencies, and ranges from short-term overnight investments to long-term loans. Investors can choose between "high-yield," "distressed," "foreign exchange," or "money market" style investments depending on the type of manager and mandate. There is a profound difference in returns and standard deviations between those managers who stick to the most liquid, highest quality bonds and those who focus on the cheapest distressed equity-like end of the spectrum. Similarly, the risks associated with investing in corporate credits or in local currency assets differ from the risks associated with sovereign credits or reserve currency assets.

Emerging markets debt is either denominated in reserve currencies (typically U.S. dollars) or in local currencies. There are four types of reserve currency debt instruments: "Brady bonds," global eurobonds, bank loans, and private sector eurobonds. Debt instruments denominated in local currencies are the predominant form of financing for most countries, but are considered a separate investment

strategy with their own index (the J.P. Morgan Emerging Local Markets Index Plus, or JPM ELMI+) and dedicated managers. Nevertheless, most emerging markets external debt managers have an ability to take small positions in local issues as part of their mandate. Similarly, most managers take some positions in private-sector (corporate) paper but concentrate on sovereign credits.

The majority of reserve currency debt instruments are U.S. dollar-denominated although there is some debt outstanding in other major western currencies. Brady bonds usually carry a U.S. Treasury zero-coupon bond as collateral for the principal and U.S. interest guarantees for the first three coupons on a rolling basis (i.e., the guarantee covers the first three missed coupon payments at any time during the life of the bond). In order to compare the return on Brady bonds to the return on instruments without collateral, Brady bonds are quoted on a "stripped spread basis." That is, although Brady bonds cannot actually be stripped into their component parts of U.S. risk and sovereign risk, the bonds are "re-priced" to reflect the components. Thus, a Brady bond trading at LIBOR +1% is comprised of the weighted average of the collateral valued at the risk-free rate and the sovereign portion trading at LIBOR plus the entire risk premium. The first bond structured in this way was the "Aztec" bond, the result of a voluntary debt swap for Mexico in 1988. In 1990, Mexico became the first country to restructure all of its outstanding long-term debt in a Brady Plan. Subsequently, the majority of the major Latin American borrowers completed Brady exchanges, followed by middle European countries and African countries. Although Brady bonds were thought to be immune to further defaults, this has not proved to be the case. In 1999, Ecuador defaulted on its Brady bonds, while Peru substantially restructured its bonds in 2000, and Argentina declared a default on all its external debt in December 2001.

Although Peru completed a Brady agreement in March 1997, 1996 marked the beginning of the end of the Brady era, as the supply of Brady bonds dwindled both in absolute and in relative terms. Because Brady bonds are a relatively expensive form of debt, borrowers have an incentive to retire them using the proceeds from new, cheaper eurobond issues. Mexico, Argentina, the Philippines, Poland, and Venezuela have already bought back some Brady bonds. It is unclear whether any new restructuring in Argentina will have a collateral component.

As the volume of Brady bonds outstanding has diminished, the supply of non-Brady issues has exploded. For example, developing countries issued $56 billion in eurobonds in 2001 compared to $38 billion in 1996, $7 billion in 1995, and just $2 million in 1990. In the period 1997-2001, sovereign and corporate debt issuance totaled $372 billion. The number and size of local issues have also mushroomed, with many issues coming from outside Latin America. Asia now accounts for 39.4% of all local currency sovereign debt, and about 15.0% of reserve currency sovereign issues. Many companies borrowed in U.S. dollars in the 1970s, 1980s, and early 1990s (despite generating revenues in local currency) simply

because there was no term market available locally. The development of the local currency debt market has evolved as the local economies have become more stable.

Despite extraordinary returns, emerging markets debt is probably best known for its periodic crises. A review of emerging markets, beginning with the period of non-performance in the early- to mid-1980s up to the most recent problems in Argentina and Venezuela, would suggest that they fall apart with alarming regularity, yet the external U.S. dollar-based debt has performed consistently well. These observations are less contradictory than they seem. Emerging countries have generally had more flexibility in restructuring or delaying payments on local currency obligations than on external debt obligations because the external debt typically contains cross default provisions such that any attempt to change or delay payment on any one reserve currency loan triggers default status on every reserve currency loan. With the exception of the current debacle in Argentina, each other major market crisis has been precipitated by a devaluation of the local currency and/or default on local currency obligations. While the collapse of the peso in 1994, for example, caused a wholesale drop in market values, the U.S. dollar-denominated debt remained performing. Similarly, in 1998, Russia defaulted on its local debt three months prior to defaulting on its reserve currency debt. Since the vast majority of emerging markets debt managers concentrate on reserve currency sovereign debt rather than local currency or corporate issues, the effect of devaluations has been transitory. Certainly, the devaluations make U.S. dollar debt more costly to service, but from a lender's perspective the face value of the loans and the legal framework remain unchanged.

An Independent Asset Class?

Over its brief history, emerging markets debt has functioned as an independent asset class. Its returns have not been highly correlated with those of other standard asset classes and its inclusion in a portfolio would have provided diversification benefits. For the period from January 1, 1991 to March 31, 2002, the correlation of the reserve currency sovereign Emerging Markets Debt Composite (EMD Composite)[1] Index with the S&P 500 and MSCI EAFE indexes were 0.42 and 0.26, respectively. Over the same period, the correlation of the EMD Composite Index with the Morgan Stanley Capital International (MSCI) Emerging Markets Free (EMF) Index and the Lehman Brothers High Yield Index, the two asset classes with which it is most frequently compared, were 0.59 and 0.51, respectively. These correlations are in line with the 0.46 correlation of the S&P 500 and the MSCI EAFE over the same period.

[1] The emerging markets debt data for reserve currency sovereign debt are based on a composite benchmark constructed of J.P. Morgan Emerging Markets Bond Index (JPM EMBI) data from January 1, 1991 to December 31, 1993, J.P. Morgan Emerging Markets Bond Index Plus (JPM EMBI+) data from January 1, 1994 to December 31, 1994, and J.P. Morgan Emerging Markets Bond Index Global (JPM EMBIG) data from January 1, 1995 to present.

While institutional investors have typically participated in emerging markets debt on an opportunistic basis, an argument can be made that it deserves consideration for a permanent allocation. Emerging markets debt provides diversification within emerging markets, as the geographic coverage and the risks and opportunities of emerging markets debt differ from that of the equity. For long-term investors that are able to stomach the volatility of emerging markets through thick and thin, emerging markets equities, while more volatile, have a higher expected return than the debt. The sovereign external debt has historically been less volatile and experienced less downside risk than the equity, but the upside potential has also been more limited. An allocation to emerging markets could be implemented by holding both the equity and the debt and rebalancing between the two based on relative valuations. Certainly, whether tactical or opportunistic, emerging markets debt allocations should be considered equity substitutes rather than fixed-income allocations.

While emerging markets debt has many characteristics of an independent asset class, its correlation with emerging markets equity increases significantly if one takes into account geographical differences between emerging markets equities and debt. The equities are predominantly Asian, while the external debt is predominantly Latin American. As of March 31, 2002, the MSCI EMF had a 55.4% allocation to Asia and a 22.9% allocation to Latin America, while the JPM EMBIG had a 55.3% allocation to Latin America and a 14.6% allocation to Asia. Between January 1, 1991 and March 31, 2002, the correlation coefficient of the JPM EMBI with the MSCI EMF Latin American subindex was 0.72, significantly higher than the 0.59 correlation with the broad MSCI EMF Index. Although there are similarities between the economic basis of returns for the equity and debt, particularly for the deeper distressed debt, in general, correlations tend to be higher when the countries' economies are stable and improving and lower during periods of financial stress. The debt tends to outperform the equity during periods of financial stress because government policies aimed at stabilizing currencies and capital flows (raising interest rates, cutting excess spending, and often provoking recession) improve credit worthiness at the expense of the local business environment. In addition, most of the external sovereign debt is denominated in U.S. dollars, minimizing the currency risk to U.S. dollar-based investors, while the equities and local currency debt are subject to significant local currency risk. The holders of the U.S. dollar-denominated sovereign debt are subject to currency risk only to the extent of an economic crisis severe enough to push a country into default.

Investing in emerging markets through exposure to both the equity and the debt also provides a means for investors to participate in the economic improvement of as many regions and countries as possible. For example, there are many countries included in the JPM EMBIG that are not in the MSCI EMF, including Nigeria, Bulgaria, Panama, Algeria, Ivory Coast, and Ecuador, which are liquid markets that have been traded for over a decade, and Lebanon, Croatia, Dominican Republic, Ukraine, and Uruguay, which are less liquid markets.

The growing market for local currency issues, usually short term and both government and corporate, allows investors to diversify within emerging markets debt since these issues are subject to different risks than the longer-term, dollar-denominated Brady bonds and eurobonds. For the period January 1, 1994 (the start of the first local-issue index) through March 31, 2002, the correlation of the local bond index (JPM ELMI+) and reserve currency index was only 0.51. The benefit of this diversification was particularly well illustrated in July 1997, when the JPM ELMI+ returned -2.8% because of Southeast Asia's currency woes, while the EMD Composite rose 4.1%. Similarly, in 1998, the JPM EMBI+ returned -11.5% because of Russia's default, while the JPM ELMI+ returned 18.4%. This distinction will also be visible in Argentina over time, given the decoupling of peso loans from U.S. dollar-denominated loans.

Returns

Emerging markets debt earned an average annual compound return of 14% from January 1991 to March 2002, matching or outperforming all major stock and bond indexes. For example, over the same period, U.S. high-yield bonds (Lehman Brothers High Yield Index) returned 10.5%, U.S. government bonds (Lehman Brothers Government Bond Index), 7.6%, and U.S. stocks (S&P 500), 14.1%. The MSCI EMF index returned 8.1% for the same period.

All types of bonds benefited from the falling interest rate, low-inflation environment of the 1990s, but the driving force behind the strong performance of emerging markets bonds has been a combination of improving credit quality facilitated by initial debt relief and restructuring, increasing securitization (creating a broader investor base), and falling U.S. dollar interest rates. For example, at the beginning of the Gulf War in 1991, Brazilian external debt was almost entirely in the form of nonperforming loans quoted at a percentage of face value and trading around $0.20 to $0.30 on the dollar. Currently, virtually all of Brazil's external debt takes the form of LIBOR-based eurobonds quoted on a yield-to-maturity basis. Country credit ratings have improved for most major borrowers and stripped spreads on reserve currency sovereign bonds have dropped correspondingly, falling from 1,894 basis points (bps) on March 9, 1995 to an historic low of 315 bps on October 7, 1997. Since 1997, spreads have expanded as countries have revisited their earlier economic problems. Spreads have contracted as these crises have been resolved, but have not revisited 1995 highs or 1997 lows. For example, following the spectacular fall of Russia in 1998, stripped spreads reached a high of 1,248 bps over Treasuries on January 14, 1999, then falling to a low of 538 bps over Treasuries on March 10, 2000.

With the terrorist attacks of September 11 and the economic crisis in Argentina, spreads again widened to a stripped spread of 1,041 bps as of November 1, 2001, falling to 659 bps on March 31, 2002. While many market participants are watching Argentina as a possible strong performer once the crisis

stabilizes, the prospects of a broad market rally are limited by the resilience of emerging markets debt outside of Argentina. Although spreads widened during the early stages of Argentina's economic crisis, the broader market subsequently recovered, decoupling from Argentina. Much of the spread tightening was due to the reduction in Argentina's weight in the index from over 20% at its peak, to approximately 2% by March 2002. Argentina's weight in the index dropped as its debt dropped in value, and was eliminated from the index because it failed to meet liquidity requirements, or in the case of some issues, was converted to free-floating (or free-falling) pesos. While Argentina returned -67% for 2001, virtually all other subindexes posted double-digit positive returns. This dramatic shift from past market reactions, when a crisis in one country or region triggered a wholesale sell-off throughout the market that lasted through the end of the crisis, has led some to question whether the upside potential will be more muted today than it has been following past crises. However, it is premature to argue that the market contagion is over, as the crisis in Argentina has not yet been resolved and Venezuela is currently in upheaval. Nonetheless, there have always been opportunities to invest in emerging markets debt at high spreads, as countries' economic fundamentals have shifted over time. For example, in the early 1980s, Argentina's debt traded at $0.15 to $0.25 on the dollar—roughly where it is trading today—while in the interim, Argentina was hailed as Latin America's success story.

It is difficult to draw conclusions as to the expected return of an asset class with a limited history during which the market has transformed from a distressed, equity-like market to a broader bond market. Moreover, the historical returns reflect the huge compression in spreads from the beginning to the end of the period, and although spreads may continue to balloon periodically in response to crisis conditions, a systematic decline comparable to that of 1990-2002 is not in the cards. Nevertheless, the current 9.7% yield of the JPM EMBIG presents a fair value in today's interest rate environment, as the ratio of the emerging markets debt yield to that of Treasuries of comparable maturity is 2:1, comparable to the historical average. However, there are sectors of the market that offer compelling values for the risks taken and skilled active managers should be able to pick out today's ugly ducklings that are poised to become tomorrow's swans.

Risks

Volatility of Returns

With an annualized standard deviation of 16.3% (for the period January 1, 1991 to March 31, 2002), emerging markets debt has displayed equity-like volatility, and has been substantially more volatile than U.S. high-yield bonds (standard deviation of 8.3%). However, the market has changed so much during its short history that future volatility assumptions should not be blindly extrapolated from the past. Declining interest rates in 1993 fueled a bull market rise that was followed in 1994 by rapidly rising

interest rates. Mexico, suffering from political as well as economic upheaval, devalued the peso in December 1994, raising fears of an emerging markets meltdown. The carnage continued into 1995 as the crisis deepened and capital outflows from emerging markets accelerated. The JPM EMBI dropped 9.6% on January 10, 1995 alone. The United States stepped in with a $20 billion assistance package to Mexico, and the JPM EMBI rose almost 23% in the second quarter, its best quarter ever. At the time, this seemed a rare period for emerging markets debt, but in fact the same pattern of steep dislocations followed by swift recoveries recurred in 1997 and 1998. Thus far, the broad market reaction to Argentina's crisis has been shorter and more subdued.

As emerging markets debt ownership gradually shifts from short-term, opportunistic investors like hedge funds, proprietary desks of money center banks, and flight capital to longer-term investors like pension funds, foundations, endowments, and traditional bond funds, the use of derivatives and leverage—and the volatility they generate—is likely to diminish. Although no firm numbers are available, it is evident that many dedicated emerging markets hedge funds disbanded after the Russia crisis and that those remaining tend to have lower leverage and a higher beta with emerging markets debt indexes. However, it is unclear whether this discipline will last, as hedge funds have experienced strong returns in the last four years, and such success often stimulates an increased appetite for risk.

Although a wider and more stable investor base should help reduce the wildest price swings, such as those visible during the Russia crisis when leveraged hedge funds had to liquidate to meet margin calls, it would be cavalier to assume that similar crises will not erupt periodically. Consequently, it seems prudent to anticipate that the average volatility of emerging markets debt will remain about the same as that of equities, with long stretches of relatively low volatility interrupted by short bursts of frenetic trading whenever a crisis erupts.

Other Risks

Although the standard deviation of a portfolio's returns may be reduced by a modest inclusion of emerging markets debt, other risks will likely increase as individual emerging markets are subject to political and economic pressures from which developed countries are largely immune. It is important to note the heterogeneity of these markets and to realize that different countries and different debt instruments are sensitive in different degrees not only to U.S. interest rates swings but also to changes in credit perceptions. The single largest risk has been emerging markets price risk, as market prices have tended to systematically decline in the face of a general flight to quality or a crisis in one emerging country or region, despite the heterogeneity of markets and the maintenance of economic and financial fundamentals. This price risk thus far has proven to be minimal in the case of Argentina, as emerging markets initially sold off, but quickly recovered while the price of Argentina's debt continued to slide.

Default Risk. For any number of reasons, developing economies have always been more liable than developed countries to default on their debt obligations, and since the debt crisis of the 1980s, local currency sovereign paper has been more prone to default than reserve currency issues. Many observers also argue that the value of sovereign emerging markets debt is likely to remain above that of comparable high-yield issues in the event of default. The rationale for this argument is that while corporations can go into bankruptcy and pay creditors cents on the dollar from the proceeds of liquidated assets, countries cannot go out of business, but instead must negotiate with foreign creditors, which typically join forces to negotiate a good outcome. Furthermore, the sovereign debtors have an incentive to provide creditors with reasonable terms because they need to continue to access the capital markets for financing. In the past, when a country has tried to pay only some of its foreign creditors, it has been sued and forced to pay everyone since virtually all debt legally has the same status. However, default risk is still present and investors should recognize that in the case of default even sovereign debt could still sink to a fraction of face value.

Although ideological opposition to free-market reforms appears to be diminishing in most developing countries, the transition from a state-controlled or heavily bureaucratized economy to one driven by the dictates of open markets often creates visible and socially disruptive disparities in wealth that may generate future resentment and revolt at the grass roots level. Certainly, this may be the case in Argentina where the man on the street may perceive the "free market experiment" as the cause of the recent economic collapse. Similarly, Venezuela is experiencing the collision of political and economic unrest.

Interest-Rate Risk. Like all debt instruments, emerging markets debt is subject to interest-rate risk, which we would characterize as relatively high at present, given the low level of interest rates. However, there tends to be a "floor" interest rate below which investors will not purchase emerging markets debt because although they often regard it as a source of extra yield in low interest rate environments, the perception of absolute risk often causes them to shy away when the yield falls below 8% to 10%, even if the ratio of yields relative to that of Treasuries of comparable maturity is relatively large. In order for yields to fall below this floor, both Treasury yields and emerging markets debt yield spreads must be very low (i.e., Treasury yields of less than 5% and emerging markets debt yield spreads of less than 3%)—either condition alone might make investors nervous that they would not be adequately compensated for the degree of risk they are taking. This behavior serves to create a yield "floor" as demand dwindles, keeping yields at the 8% to 10% level.

The pre-1994 surge in capital flows to developing economies took place during a period of declining global interest rates, the reversal of which resulted in the 1994 and early 1995 reversal of this flow of funds. Prices for emerging markets debt plummeted early in 1994 when the Federal Reserve's

hike in short-term interest rates squeezed leveraged speculators who were borrowing short to invest further out on the yield curve—whenever a liquidity squeeze of this sort occurs, the markets that are hardest hit are always those of lower quality and lesser liquidity. At this point, the underlying fundamentals of emerging markets debt had barely changed—indeed, in most cases they had shown steady and continued improvement—but in the short term, the rise in U.S. interest rates dictated prices. The current low interest rate environment has been helpful to emerging markets debtors, but the slowdown in Western economies has been detrimental. The prospect of rising interest rates is a risk for emerging markets debt especially if higher rates come without a concurrent increase in Western demand for goods, as Latin American countries remain dependent on strong export demand from Western countries to service their interest and principal payments.

Brady bonds, which now represent less than 10% of the total market, are particularly sensitive to U.S. interest rate volatility because the principal of Brady bonds is collateralized by long-term, zero-coupon U.S. Treasury securities. However, most Brady bond issuers owe U.S. dollars and export commodities, and so the damage inflicted on their balance of payments by a rise in U.S. interest rates may be more or less offset by the increased revenue from higher commodity prices since the two are positively correlated. However, the net change depends on how closely a given rise in interest rates is mirrored by a rise in a country's key commodities, and on the size of its outstanding debt relative to its commodity exports. For example, in early 1996, a rise in energy prices triggered a sell-off in U.S. bonds, but a rally in the Brady bonds of oil-exporting nations like Mexico, Venezuela, and Nigeria that were better able to service their debt. The net result was a 10.3% rise in Brady bonds over a five-month period in which U.S. long-term interest rates rose 104 bps.

Different types of emerging markets debt have different sensitivities to changes in U.S. interest rates. Brady bonds have the most interest rate risk, but the negative impact of interest rates is often mitigated by increases in commodity prices, as most Brady bond issuers are also commodity exporters. In general, emerging markets debt tends to attract the most capital when U.S. interest rates are low, as yield-hungry investors have more limited options for high-yield investments, but demand tends to dry up as emerging markets debt yields approach the 8% to 10% floor.

Commodity Price Risk. Because more than half of the market capitalization of the JPM EMBIG is accounted for by oil-exporting countries, oil prices have a significant impact on the market as a whole, as government oil revenue declines when oil prices fall. Corporate debt is also impacted, although less directly, if the drop in oil revenues results in a slowdown in the economy through reduced government spending. Conversely, the remainder of the market capitalization of the index reflects debt of countries that are net importers of oil. An increase in oil prices adversely impacts the corporate debt in oil-importing countries, as corporate profit margins come under pressure. However, sovereign debt is also effected to

the extent that the rise in oil prices slows down economic growth, reduces tax revenues, and increases demand for spending on social programs. Beyond dependence on oil revenues, individual countries are still disproportionately dependent on commodities despite continued work to diversify their economies. Thus Peru's economy is highly sensitive to the Humboldt current ("el Niño") destabilizing anchovy exports, and Brazil and Asia are sensitive to global paper prices.

Currency Risk. Because developed markets bonds are denominated in multiple currencies, the management of global bond portfolios requires extensive currency management expertise. In contrast, the majority of emerging markets debt is still concentrated in U.S. dollar-denominated bonds, and so U.S. dollar-based investors need not directly incur currency risk. However, there is still some indirect currency risk given that rising inflation and falling local currencies make it more difficult to repay U.S. dollar-denominated debt. Currency exchange rates are most important to U.S. dollar-based investors for those issues denominated in European or Asian currencies, and in many instances managers may hedge these exposures in order to minimize portfolio risk, however, managers are sometimes forced to manage currency risks without the use of hedges, as some are prohibitively expensive or unavailable. Many issuers of local currency debt are burdened with a history of high inflation, and therefore tend to issue debt with short maturities relative to debt denominated in reserve currencies. Local currency investments require significant expertise to monitor real interest rates against devaluation risk. As we have seen in Argentina, even "stable" local currencies can fail. With the close of the foreign exchange markets in Argentina in April 2002, it is now virtually impossible for the private sector to make payments to foreign creditors.

Before the Mexican crisis erupted, investors paid far too little attention to the twin dangers of devaluation and inflation. Mexico, Argentina, Brazil, and many developing countries have at times allowed their currencies to strengthen in order to attract foreign investment flows and, as a result, have suffered balance-of-trade deficits. When these deficits reach a certain point, however, the currency inevitably comes under attack, as speculators perceive the necessity of devaluation and longer-term investors hedge against the increased possibility of currency exchange losses. As has occurred in Argentina, governments often delay the inevitable because of the possibility that devaluation might trigger both a rise in inflation and a recession exacerbated by depreciation in the value of the country's assets. However, rather than buying time in which to address fundamental imbalances, such delays often worsen underlying problems. Although it has been a decade since Brazil, for example, had inflation of 30% per month, lack of confidence in the local currency is still a risk.

On the other hand, in most countries the influx of foreign capital in the 1990s was not generally squandered on "white elephants" (as was often the case in the 1970s), but was largely invested in structural improvements which, in the long run, should enhance exports and strengthen currencies. Many countries,

especially in Latin America, have successfully tackled rampant inflation as part of their macroeconomic reform policies, but devaluation remains a threat in countries dependent on continuing inflows of foreign capital to finance a large and persistent current account deficit. Unless countries make unpopular choices, such as reducing social spending or increasing taxes to bring down their current account deficits, this risk may in fact become more pronounced as large privatization programs are completed, and these one-time capital infusions are no longer available to offset deficit spending.

Investment Vehicles

Investors can choose from open- or closed-end mutual funds, separate accounts, institutional commingled funds, or hedge funds. There is no index product specifically available although the major investment banks would create a derivative index product. Most managers focus on sovereign debt and identify themselves as either local currency investors or reserve currency investors (who may opportunistically hold 5% to 10% in local currency sovereign or corporate paper). There are also a few managers who invest in a mix of local and reserve currency sovereign debt and private sector debt.

Managers vary from "core" managers who track the JPM EMBI+ and JPM EMBIG relatively closely, taking little or no corporate or local market (currency) risk, to "satellite" managers who focus on the equity-like defaulted loans. Most managers are benchmarked to the JPM EMBIG or JPM EMBI+ and tend to focus on reserve currency sovereign debt, sometimes investing a small percentage of assets in corporate and local issues. Managers benchmarked to the JPM ELMI+ focus on sovereign debt in local currencies. In addition, some hedge funds and long-only managers focus on corporate debt and sovereign distressed debt that are excluded from the major benchmarks. Fixed-income arbitrage managers may also invest in emerging markets debt by exploiting pricing differentials between similar securities with identical credit risk. In general, emerging markets debt managers tend to diverge from market benchmarks in terms of country weightings, as the indexes can be quite concentrated in individual countries and regions. For example, as of March 31, 2002, Brazil had a 20.9% weight and Mexico, a 19.2% weight, in the JPM EMBIG. However, most long-only managers do have at least some benchmark sensitivity, as they typically chose to underweight, rather than exclude, debt of countries that in their view are most likely to default.

Emerging markets debt can also be found within international, global, and high-yield portfolios as well as within some emerging markets equity portfolios. Except for balanced emerging markets portfolios or truly global bond portfolios, which have permanent allocations to emerging markets debt, many of these managers are yield-driven and are not examining individual country fundamentals or considering the exchange rate risks related to currency mismatches between debt service and revenues,

particularly among private sector borrowers. It is questionable whether these managers have the capabilities to evaluate emerging markets debt instruments properly and whether their portfolios should include such issues.

Managers specializing in reserve currency sovereign debt tend to use a top-down approach to investing, making bets on countries that look promising and underweighting the Argentinas of the opportunity set. Within countries that have the best prospects, managers then assess relative value across the yield curve. Fewer managers specializing in this market segment have a bottom-up approach, but those that do tend to hold significant amounts of non-benchmark countries and/or less liquid assets within the benchmark universe. Hedge funds can be thought of as expensive satellites since they tend to have a long bias and a high beta with the index. Nevertheless, the ability to go short, while expensive, can add more than enough value to compensate for the cost of shorting, so it is worthwhile to consider implementation of emerging markets debt exposure through long/short hedge funds. In contrast to emerging markets equities, the debt market is very liquid, making shorting very easy to implement. The expense of going short is offset somewhat by the richness of going long on a high-coupon asset, and is matched in arbitrage trades, such that the value of the long position helps cover the cost of the short position. Managers investing in reserve currency corporates perform credit analysis on individual corporate credits with or without adding a top-down analysis of the relative attractiveness of countries. Those investing in local currency corporate and sovereign debt also perform exchange-rate analysis to evaluate the probability that devaluation or inflation will confiscate the real value of the coupon payments over their investment horizon.

Manager selection can dramatically influence returns in emerging markets debt. For example, the JPM EMBIG return for 2001 was 1.4% compared to a Cambridge Associates manager median return of 10.8%. Avoiding or substantially underweighting the trouble spots—which managers are skilled at identifying in advance—creates significant room to add value to the index through both higher returns and lower volatility. For example, only two of the 24 active managers in our database had returns below 5% for 2001. The JPM EMBIG excluding Argentina returned a hearty 20% for 2001 with virtually every country in the index showing positive returns. Thus, active managers who underweighted Argentina dramatically outperformed. Given the broadening of the market in recent years, managers can develop more diversified portfolios than in the past, although investors should still expect heavy concentration in Latin American issues.

As noted above, additional emerging markets diversification can be obtained through investing in both the debt and equities combined. In theory, an investment in emerging markets would be best implemented by hiring a manager that has skill in both the equity and debt, and invests in each country through the equity and/or debt based on the relative attractiveness of the securities. Such a manager

would compare the yield curve to equity valuations to determine whether the equity premium was attractive, and would consider currency risk and liquidity risks. Managers implementing an emerging markets allocation in this manner might choose to invest in only the debt in African countries, Peru, and Argentina, only the equity in India, and both the equity and debt in Brazil, for example. Unfortunately, not many managers have skill in both emerging markets equity and debt, and those few who appear to be skilled in both areas have no mechanism to compare their valuations.

Benchmarks

There is a variety of emerging markets benchmarks, although most managers focus on sovereign debt and use sovereign benchmarks. The most popular benchmark at present is the JPM EMBIG, which has the broadest coverage among reserve currency sovereign debt benchmarks. The first two available benchmarks were the Salomon Brothers Brady Bond Index and the JPM EMBI, which became available in April 1990 and December 1990, respectively. These benchmarks track total returns for Brady bonds only, and as such include issues for 11 countries. Both benchmarks exclude issues with less than $500 million outstanding and J.P. Morgan has additional liquidity requirements based on bid/offer spreads. The JPM EMBI+, which was incepted in January 1995 with returns dating back to 1994, adds sovereign, local, and eurobond issues, as long as the bonds are reserve-currency denominated and meet their liquidity criteria. The JPM EMBI+ includes issues from 19 countries. The JPM EMBIG was introduced in January 2000 with returns dating back to 1995. Like the JPM EMBI+, this index includes Brady, sovereign, local, and eurobond issues; however, the index employs more relaxed liquidity constraints, and therefore includes debt from 31 countries. J.P. Morgan Chase also maintains a constrained version of the JPM EMBIG because country and regional weightings can be quite high if left unconstrained.[2] This index is often used for mandates limiting individual country exposure. The JPM ELMI+, which tracks total returns for local-currency-denominated money market instruments in 22 emerging markets, was initiated in December 1993.

[2] The constraints are based on the face value outstanding of each country's debt included in the JPM EMBIG. The index includes 100% of the first $5 billion of each country's debt (in US$), 75% of the next $5 billion, 50% of the next $5 billion, 25% of the next $10 billion, and 10% of the next $10 billion. Any eligible debt that exceeds US$35 billion is excluded. The ratio of face value of debt included to total face value of eligible debt is applied to each bond in the country. The constituents of the constrained index are weighted at their market-cap value. This methodology is used to limit rebalancing to the addition and/or removal of debt from the JPM EMBIG. All securities in the JPM EMBIG are also in the constrained version of the index.

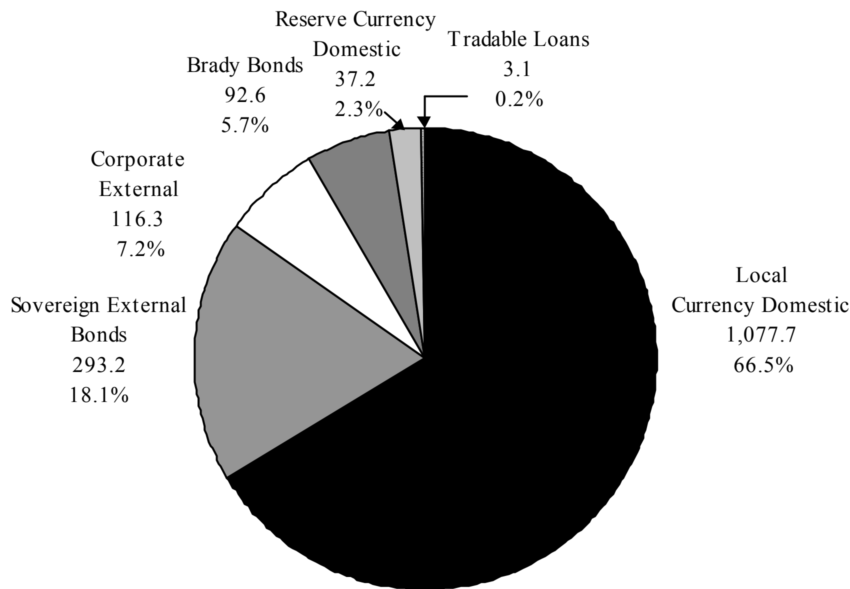
EXHIBITS

Exhibit 1

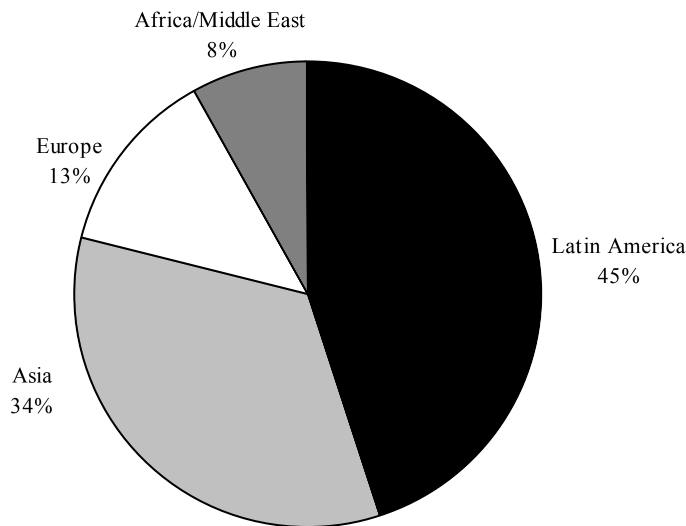
EMERGING MARKETS DEBT UNIVERSE

Total Market Capitalization of $1,620 billion as of December 31, 2000

Market Capitalization by Instrument
(US$ billions)



Market Capitalization by Region



Source: Grantham, Mayo, Van Otterloo & Company.

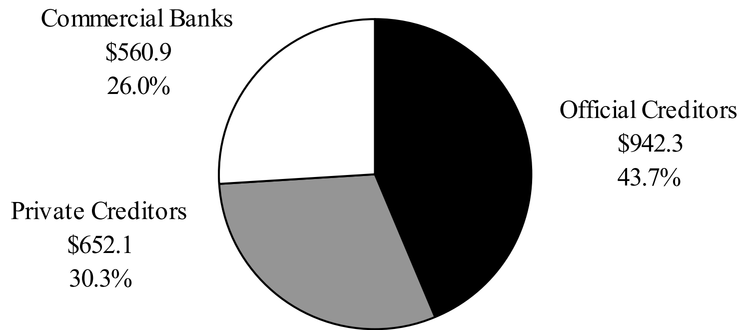
Notes: Data represent investable universe only. Figures may not total due to rounding.

Exhibit 2

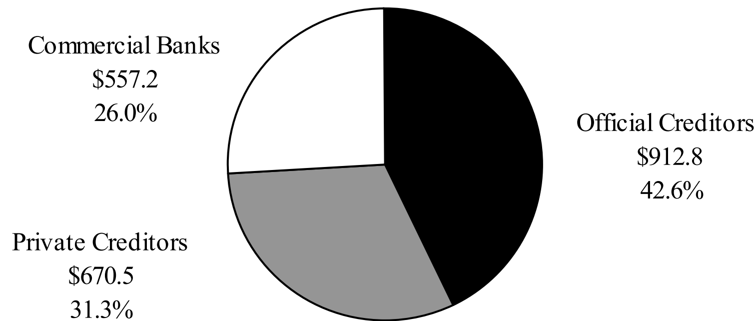
INVESTORS IN EXTERNAL DEBT OF EMERGING MARKETS

(US$ billions)

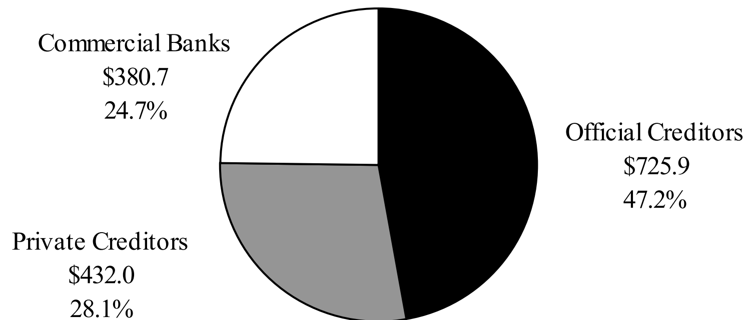
2001 Estimated



2000



1993



Source: *World Economic Outlook, October 2001* (International Monetary Fund).

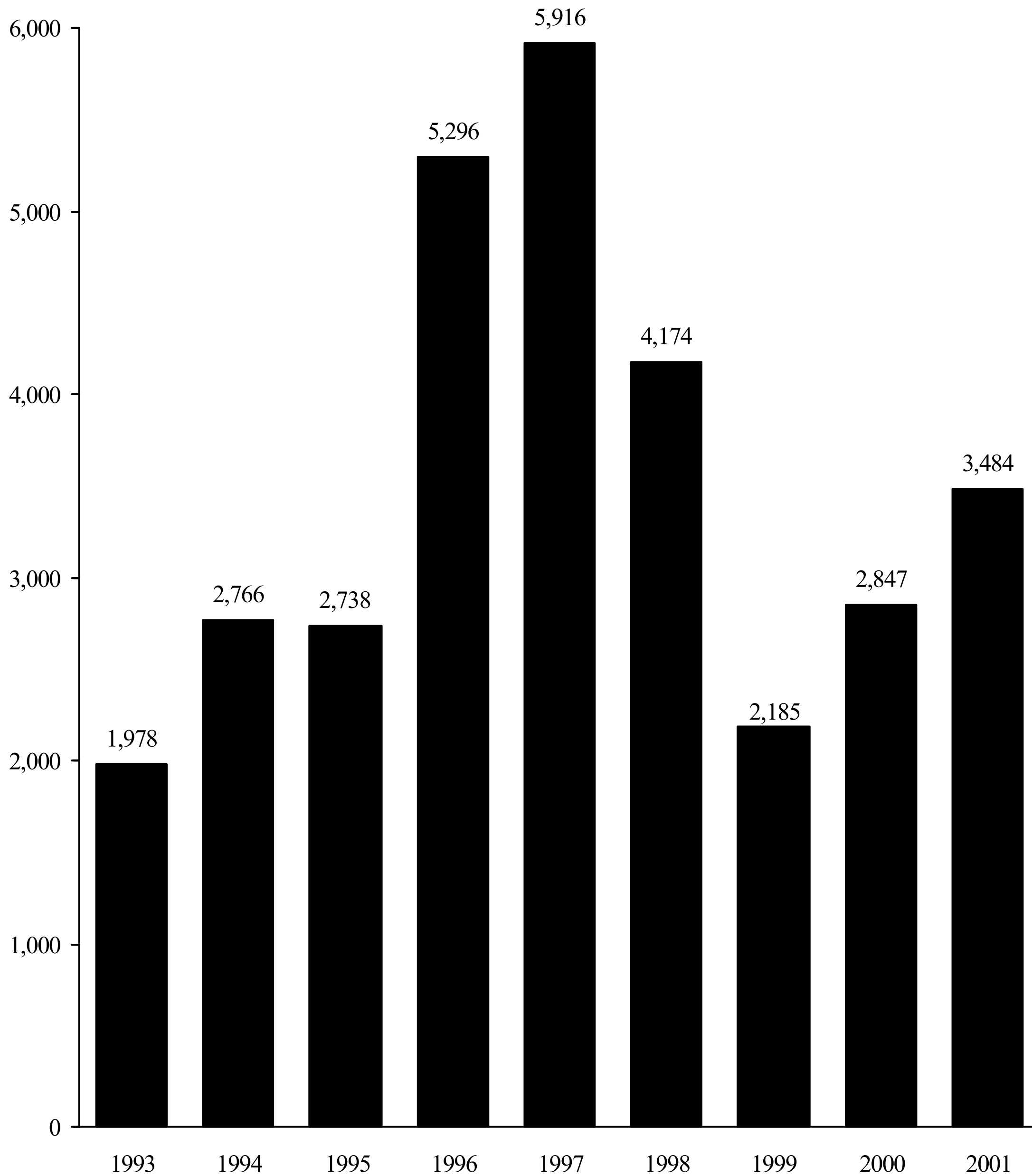
Note: Included in aggregate composites are 125 emerging markets.

Exhibit 3

TRADING VOLUME IN EMERGING MARKETS DEBT

January 1, 1993 - December 31, 2001

(US$ billions)



Source: Emerging Markets Traders Association.

Exhibit 4

COUNTRY CREDIT QUALITY RATINGS

	December 31, 1997	March 31, 2002
Africa		
Egypt	BBB-	BBB-
Morocco	NR	BB
South Africa	BB+	BBB-
Asia		
China	BBB+	BBB
Hong Kong	A+	A+
India	BB+	BB
Korea	B+	BBB+
Malaysia	A	BBB
The Philippines	BB+	BB+
Singapore	AAA	AAA
Taiwan	AA+	AA
Thailand	BBB	BBB-
Europe/Middle East		
Bulgaria	AA+	BB-
Croatia	BBB-	BBB-
Czech Republic	A	A-
Hungary	BBB-	A-
Israel	A-	A-
Lebanon	BB-	B
Pakistan	B+	B-
Poland	BBB-	BBB+
Qatar	BBB	BBB+
Russia	BB-	B+
Slovak Republic	BBB-	BBB-
Turkey	B	B-
Ukraine	NR	B
Latin America		
Argentina	BB	SD
Brazil	BB-	BB-
Chile	A-	A-
Colombia	BBB-	BB
Dominican Republic	B+	BB-
Ecuador	NR	CCC+
Mexico	BB	BBB-
Panama	BB+	BB
Peru	BB	BB-
Uruguay	BBB-	BB+
Venezuela	B+	B

Source: Standard & Poor's.

Note: Standard & Poor's Investment Grade ranges from AAA to BBB-. SD = Selective Default and NR = Not Rated.

Exhibit 5

SUMMARY DEBT RATIOS OF EMERGING MARKETS

	Total External Debt/GNP			Total External Debt/Exports		
	1990	1995	2000	1990	1995	2000
Africa						
Algeria	46.61	82.84	49.41	200.74	271.44	109.86
Ivory Coast	187.32	209.87	140.90	484.46	417.53	266.80
Egypt	78.33	55.17	29.06	241.03	186.98	134.34
Morocco	98.48	71.57	55.29	293.70	201.20	139.21
Nigeria	130.70	131.69	92.94	226.37	257.37	146.77
South Africa	---	17.11	20.27	---	70.78	64.23
Asia						
China	15.55	17.15	14.06	91.38	77.29	51.18
Malaysia	36.36	40.55	50.73	44.41	39.94	36.92
The Philippines	69.36	49.67	63.12	230.10	113.62	101.35
Thailand	33.42	60.46	66.10	90.02	135.09	92.59
Europe/Middle East						
Bulgaria	56.93	80.81	85.88	153.67	147.93	136.91
Croatia	---	23.57	64.74	---	47.73	126.90
Hungary	67.09	73.68	66.76	172.15	167.58	90.19
Lebanon	51.40	25.55	59.19	58.85	141.10	---
Pakistan	49.44	48.61	53.83	249.95	256.72	300.62
Poland	88.76	40.65	40.53	251.36	118.03	129.24
Russia	10.27	36.65	66.81	---	128.97	138.41
Turkey	32.45	43.07	57.67	196.09	178.25	198.50
Ukraine	---	17.46	39.44	---	48.62	61.87
Latin America						
Argentina	46.05	38.91	52.69	373.68	335.78	381.23
Brazil	26.48	22.95	41.76	325.27	269.67	343.85
Chile	67.31	40.90	54.27	179.59	126.38	156.03
Colombia	44.66	27.99	43.22	181.02	182.70	188.49
Dominican Republic	64.69	39.82	24.68	195.82	66.85	41.98
Ecuador	124.16	82.25	107.28	362.83	255.03	180.12
Mexico	41.11	61.15	26.85	191.39	172.56	77.94
Panama	132.93	83.20	75.32	119.36	67.68	76.17
Peru	78.65	59.53	55.00	455.79	390.37	284.04
Uruguay	49.34	29.45	42.29	182.69	135.96	182.37
Venezuela	70.35	47.52	32.01	154.54	158.48	102.40

Source: The World Bank.

Exhibit 6

COUNTRY ALLOCATION OF EMERGING MARKETS INDEXES (%)

As of March 31, 2002

	J.P. Morgan Emerging Markets Bond Index Global (EMBI Global)	J.P. Morgan Emerging Markets Bond Index Plus (EMBI+)	J.P. Morgan Emerging Markets Bond Index (EMBI)	J.P. Morgan Emerging Local Markets Index Plus (ELMI+)	MSCI Emerging Markets Free Index (MSCI EMF)
Africa					
Algeria	0.3	---	---	---	---
Ivory Coast	0.1	---	---	---	---
Egypt	0.8	---	---	1.8	0.2
Morocco	0.8	1.0	---	---	0.2
Nigeria	1.8	1.0	2.6	---	---
South Africa	1.1	---	---	5.4	9.9
Africa:	4.8	1.9	2.6	7.2	10.3
Asia					
China	1.7	---	---	2.0	5.4
Hong Kong	---	---	---	9.8	---
India	---	---	---	2.0	5.5
Indonesia	---	---	---	---	0.9
Malaysia	3.8	2.3	---	---	6.5
The Philippines	3.9	3.2	---	2.0	0.7
Singapore	---	---	---	9.8	---
South Korea	4.9	2.3	---	2.0	19.7
Taiwan	---	---	---	2.0	14.8
Thailand	0.3	---	---	9.9	1.8
Asia:	14.6	7.9	0.0	39.4	55.4
Europe/Middle East					
Bulgaria	2.1	2.6	6.9	---	---
Croatia	0.3	---	---	---	---
Czech Republic	---	---	---	5.5	0.6
Hungary	0.4	---	---	4.5	0.9
Israel	---	---	---	4.4	3.3
Jordan	---		---	---	0.2
Lebanon	1.6	---	---	---	---
Pakistan	0.3	---	---	---	0.2
Poland	1.9	2.4	5.4	6.7	1.1
Qatar	---	1.8	---	---	---
Russia	14.6	18.3	25.1	---	3.6
Slovak Republic	---	---	---	2.1	---
Turkey	3.5	3.3	---	8.5	1.6
Ukraine	0.5	0.7	---	---	---
Europe/Mideast:	25.3	29.1	37.3	31.8	11.4
Latin America					
Argentina	1.8	2.2	2.8	1.8	0.5
Brazil	20.9	25.1	26.7	2.1	8.7
Chile	0.6	---	---	2.1	2.3
Colombia	3.0	2.5	---	2.0	0.1
Dominican Republic	0.3	---	---	---	---
Ecuador	1.3	1.6	4.2	---	---
Mexico	19.2	21.4	12.1	10.3	10.6
Panama	2.0	2.0	2.1	---	---
Peru	1.6	1.1	3.1	---	0.4
Uruguay	0.2	---	---	---	---
Venezuela	4.4	5.2	9.2	3.3	0.2
Latin America:	55.3	61.1	60.1	21.6	22.9

Sources: J.P. Morgan Securities, Inc. and Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

Note: Figures may not total due to rounding.

Exhibit 7

EMERGING MARKETS DEBT TYPE ALLOCATIONS

As of March 31, 2002

	Amount Outstanding (US$ in millions)			Percentage (%) of Debt Outstanding		
	Brady	Global*	Loans	Brady	Global*	Loans
Africa						
Algeria	-	-	499	-	-	100
Ivory Coast	158	-	-	100	-	-
Egypt	-	1,517	-	-	100	-
Morocco	-	-	1,506	-	-	100
Nigeria	1,500	-	1,992	43	-	57
South Africa	-	2,166	-	-	100	-
Subtotal:	1,658	3,683	3,997	18	39	43
Asia						
China	-	3,209	-	-	100	-
Malaysia	-	7,450	-	-	100	-
The Philippines	-	7,660	-	-	100	-
South Korea	-	9,480	-	-	100	-
Thailand	-	670	-	-	100	-
Subtotal:	-	28,468	-	-	100	-
Europe/Middle East						
Bulgaria	3,981	-	-	100	-	-
Croatia	656	-	-	100	-	-
Hungary	-	803	-	-	100	-
Lebanon	-	3,156	-	-	100	-
Pakistan	-	586	-	-	100	-
Poland	3,078	658	-	82	18	-
Russia	14,429	13,892	-	51	49	-
Turkey	-	6,822	-	-	100	-
Ukraine	-	1,023	-	-	100	-
Subtotal:	22,143	26,941	-	45	55	-
Latin America						
Argentina	1,610	1,947	-	45	55	-
Brazil	15,882	24,778	-	39	61	-
Chile	-	1,219	-	-	100	-
Colombia	-	5,821	-	-	100	-
Dominican Republi	-	528	-	-	100	-
Ecuador	2,440	-	-	100	-	-
Mexico	6,948	30,428	-	19	81	-
Panama	1,180	2,660	-	31	69	-
Peru	1,755	1,425	-	55	45	-
Uruguay	-	378	-	-	100	-
Venezuela	5,269	3,220	-	62	38	-
Subtotal:	35,084	72,403	-	33	67	-
Total:	58,885	131,495	3,997	30	68	2

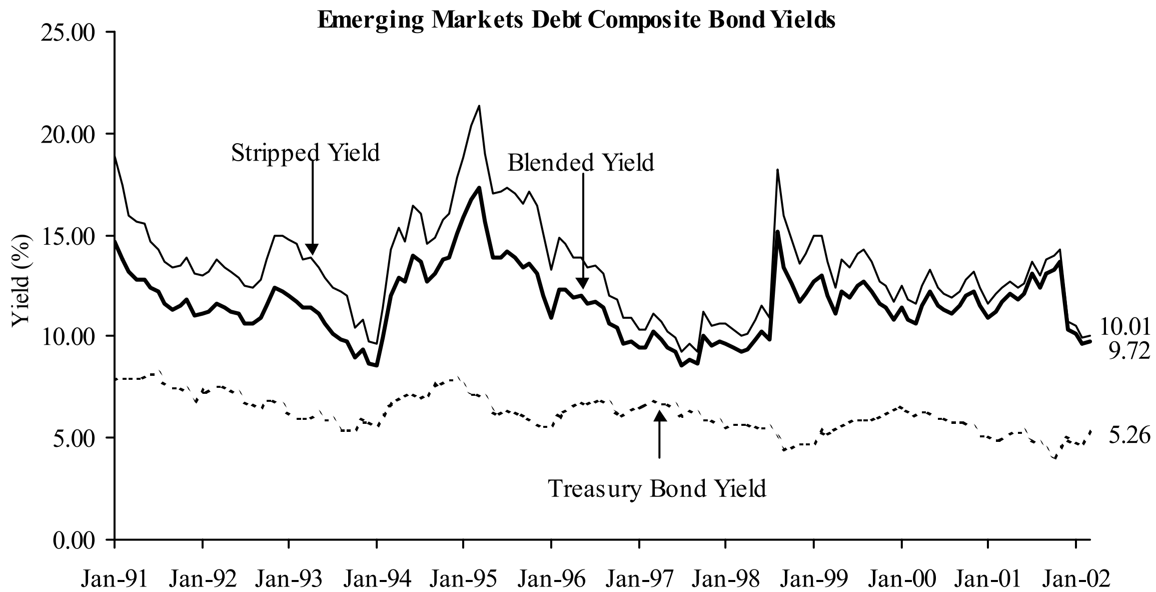
Source: J.P. Morgan Securities, Inc.

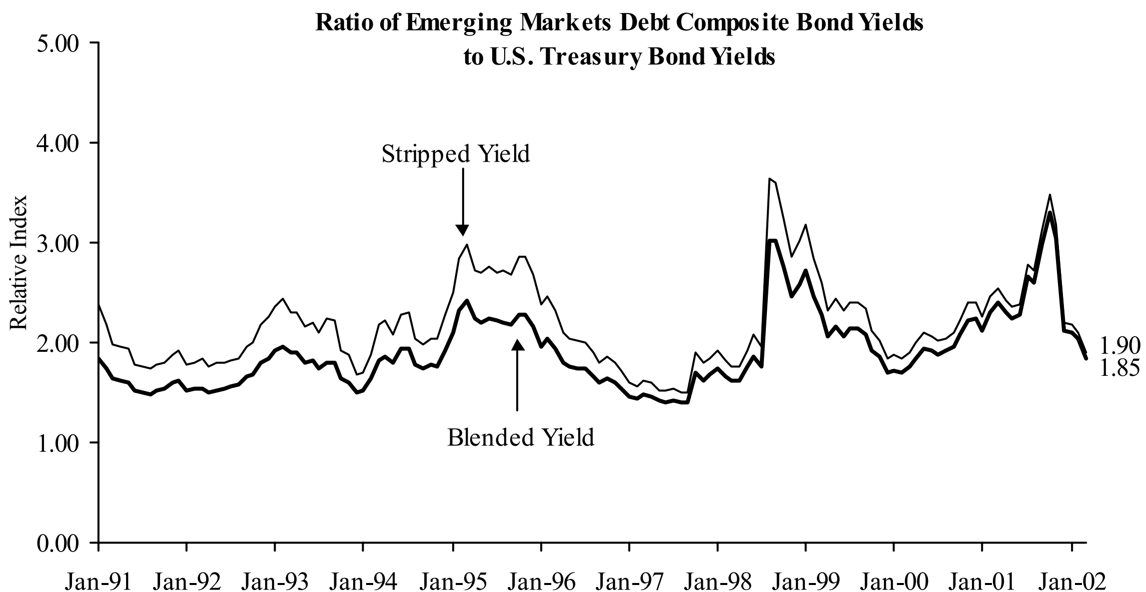
* Represents all traded securities except Brady issues.

Exhibit 8

EMERGING MARKETS DEBT COMPOSITE INDEX YIELDS

January 1, 1991 - March 31, 2002





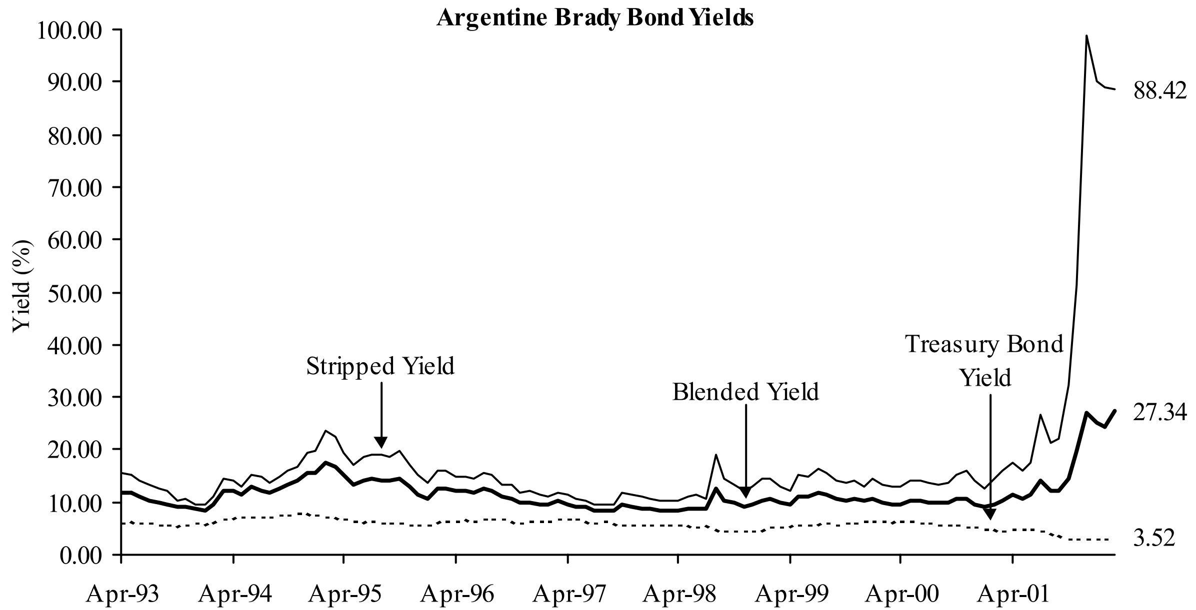
Source: J.P. Morgan Securities, Inc.

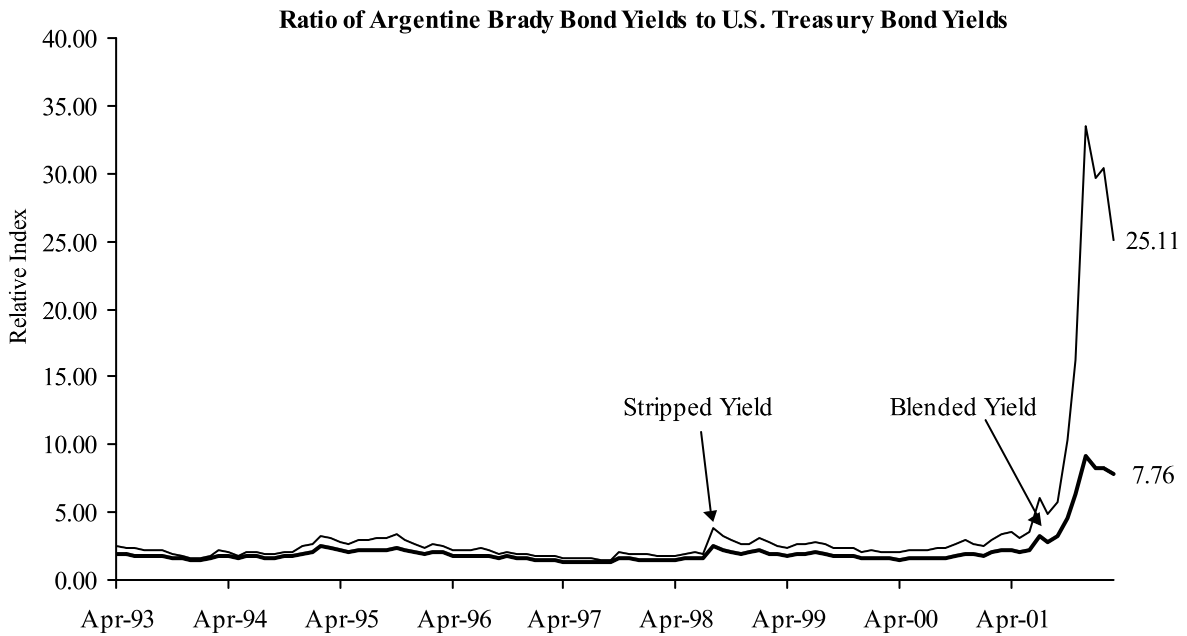
Notes: Blended yield is the yield to maturity of the bond. Stripped yield is the blended yield with the collateralized portion stripped out, reflecting the sovereign country's risk exposure. The Treasury yields shown have similar maturities to the underlying bonds. The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

Exhibit 9

ARGENTINE BRADY BONDS

April 30, 1993 - March 31, 2002





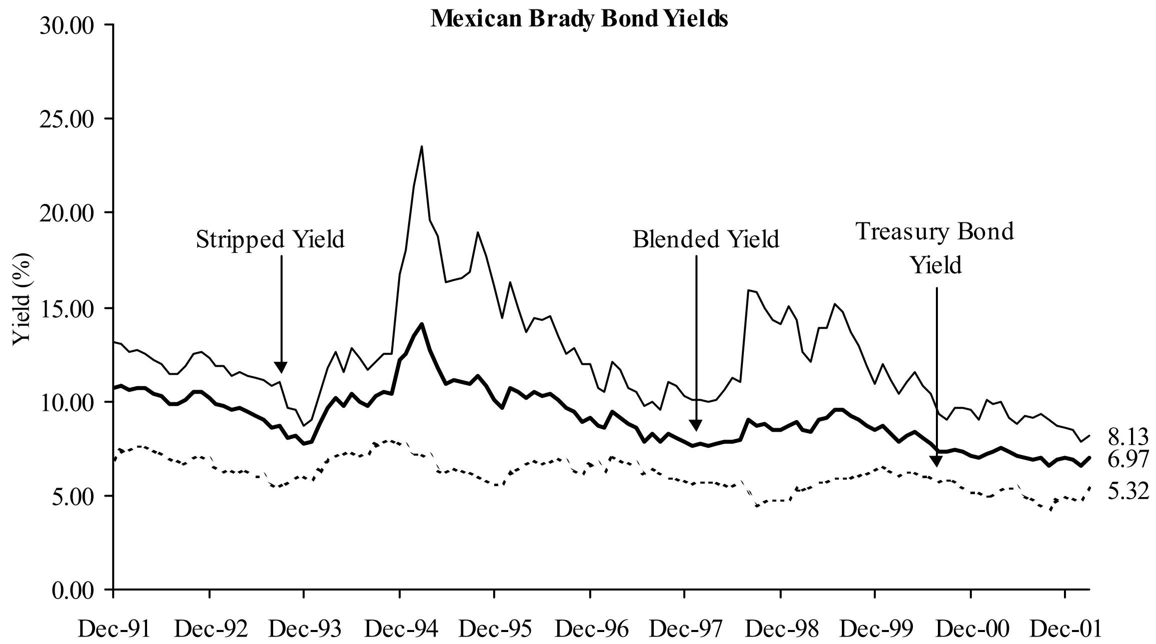
Source: J.P. Morgan Securities, Inc.

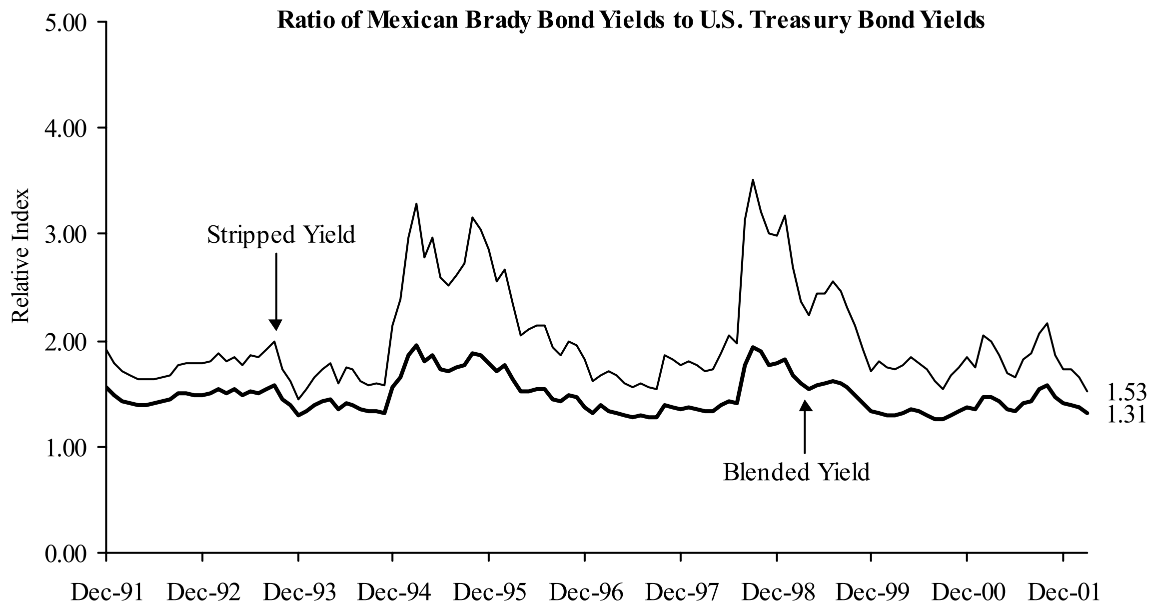
Notes: Blended yield is the yield to maturity of the bond. Stripped yield is the blended yield with the collateralized portion stripped out, reflecting the sovereign country's risk exposure. The Treasury yields shown have similar maturities to the underlying bonds.

Exhibit 10

MEXICAN BRADY BONDS

December 31, 1991 - March 31, 2002





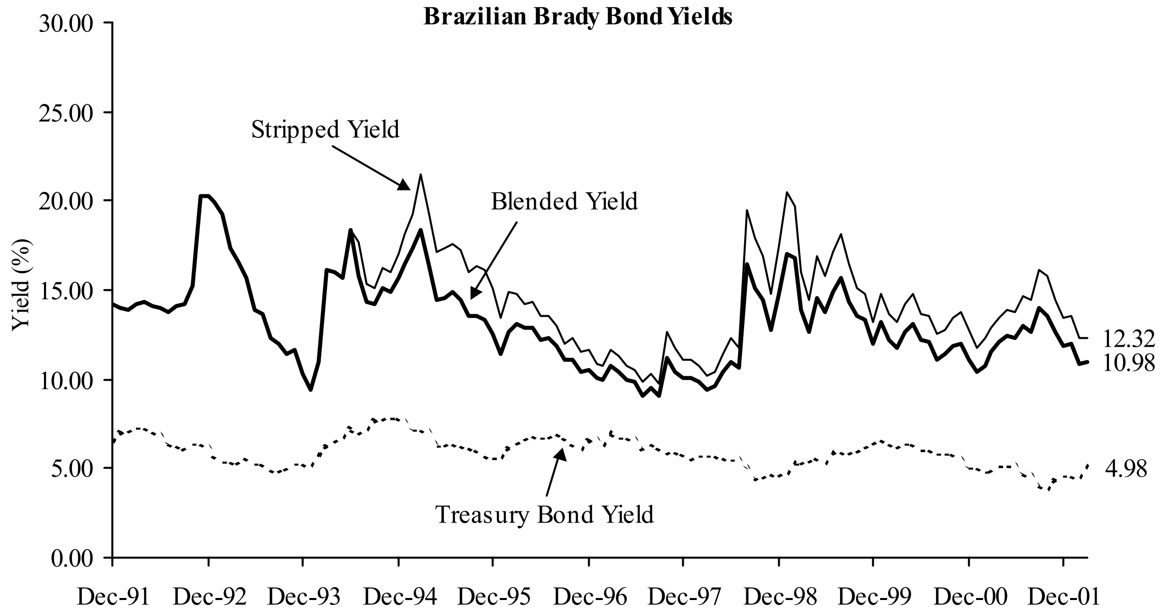
Source: J.P. Morgan Securities, Inc.

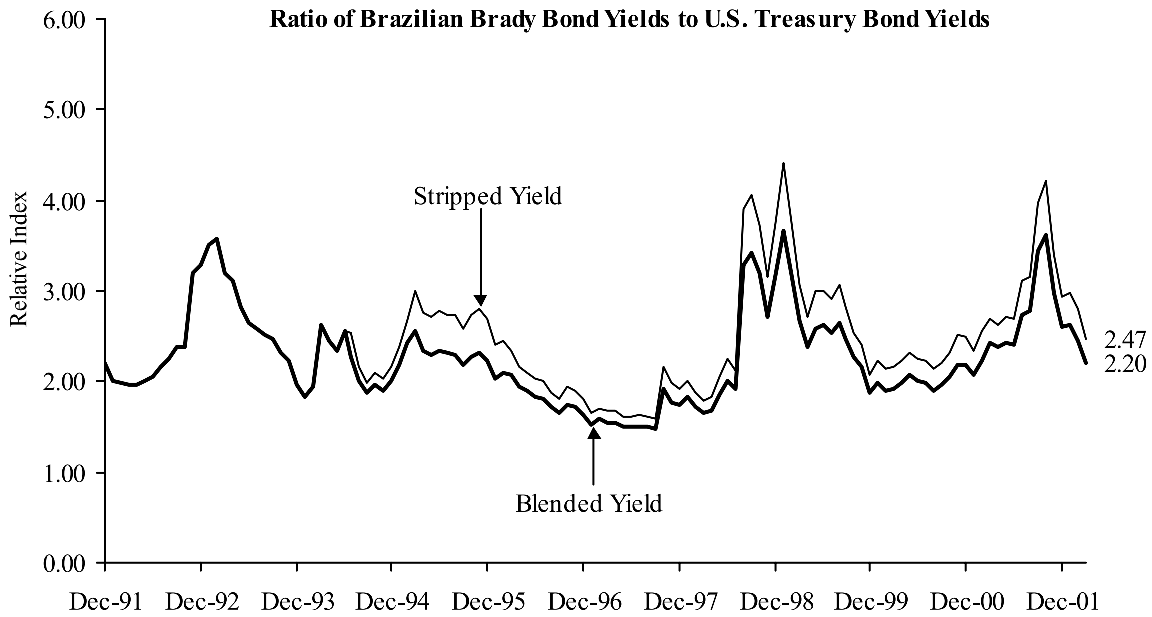
Notes: Blended yield is the yield to maturity of the bond. Stripped yield is the blended yield with the collateralized portion stripped out, reflecting the sovereign country's risk exposure. The Treasury yields shown have similar maturities to the underlying bonds.

Exhibit 11

BRAZILIAN BRADY BONDS

December 31, 1991 - March 31, 2002





Source: J.P. Morgan Securities, Inc.

Notes: Blended yield is the yield to maturity of the bond. Stripped yield is the blended yield with the collateralized portion stripped out, reflecting the sovereign country's risk exposure. The Treasury yields shown have similar maturities to the underlying bonds.

Exhibit 12

CORRELATIONS WITH EMERGING MARKETS DEBT INDEX

January 1, 1991 - December 31, 1994

	Emerging Markets Debt[1]	MSCI EAFE	MSCI EMF	MSCI EMF Latin America	LB High Yield	S&P 500	LB Agg	LB Govt Bond	JPM Non-U.S. Govt Bond	JPM ELMI+[2]
Emerging Markets Debt [1]	1.00									
MSCI EAFE	0.26	1.00								
MSCI Emerging Markets Free	0.59	0.31	1.00							
MSCI EMF Latin America	0.51	0.18	0.84	1.00						
Lehman Brothers High Yield	0.51	0.27	0.44	0.39	1.00					
S&P 500	0.42	0.46	0.58	0.56	0.39	1.00				
Lehman Brothers Aggregate	0.44	0.37	0.15	0.16	0.38	0.52	1.00			
Lehman Brothers Govt Bond	0.40	0.34	0.11	0.12	0.32	0.49	0.99	1.00		
J.P. Morgan Non-U.S. Govt Bond	0.00	0.52	-0.08	-0.16	-0.13	0.18	0.45	0.47	1.00	
J.P. Morgan ELMI+[2]	0.56	-0.10	0.57	0.42	0.11	0.03	-0.01	-0.01	0.21	1.00

January 1, 1995 - March 31, 2002

	Emerging Markets Debt[1]	MSCI EAFE	MSCI EMF	MSCI EMF Latin America	LB High Yield	S&P 500	LB Agg	LB Govt Bond	JPM Non-U.S. Govt Bond	JPM ELMI+[2]
Emerging Markets Debt [1]	1.00									
MSCI EAFE	0.52	1.00								
MSCI Emerging Markets Free	0.72	0.70	1.00							
MSCI EMF Latin America	0.80	0.62	0.90	1.00						
Lehman Brothers High Yield	0.45	0.42	0.53	0.46	1.00					
S&P 500	0.54	0.74	0.67	0.60	0.52	1.00				
Lehman Brothers Aggregate	0.12	-0.11	-0.17	-0.11	0.21	0.09	1.00			
Lehman Brothers Govt Bond	0.03	-0.18	-0.27	-0.21	0.07	0.00	0.98	1.00		
J.P. Morgan Non-U.S. Govt Bond	-0.05	0.25	-0.07	-0.15	0.04	0.07	0.32	0.34	1.00	
J.P. Morgan ELMI+[2]	0.53	0.51	0.67	0.56	0.17	0.48	-0.15	-0.19	0.27	1.00

January 1, 1991 - March 31, 2002

	Emerging Markets Debt[1]	MSCI EAFE	MSCI EMF	MSCI EMF Latin America	LB High Yield	S&P 500	LB Agg	LB Govt Bond	JPM Non-U.S. Govt Bond	JPM ELMI+[2]
Emerging Markets Debt [1]	1.00									
MSCI EAFE	0.43	1.00								
MSCI Emerging Markets Free	0.68	0.57	1.00							
MSCI EMF Latin America	0.70	0.46	0.88	1.00						
Lehman Brothers High Yield	0.46	0.36	0.51	0.46	1.00					
S&P 500	0.51	0.64	0.64	0.57	0.45	1.00				
Lehman Brothers Aggregate	0.23	0.08	-0.07	-0.02	0.26	0.21	1.00			
Lehman Brothers Govt Bond	0.15	0.02	-0.15	-0.09	0.16	0.13	0.98	1.00		
J.P. Morgan Non-U.S. Govt Bond	-0.03	0.36	-0.06	-0.14	-0.01	0.10	0.37	0.39	1.00	
J.P. Morgan ELMI+[2]	0.51	0.46	0.66	0.54	0.17	0.46	-0.13	-0.17	0.26	1.00

Sources: The Bloomberg, Lehman Brothers, Inc., Standard & Poor's, and Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

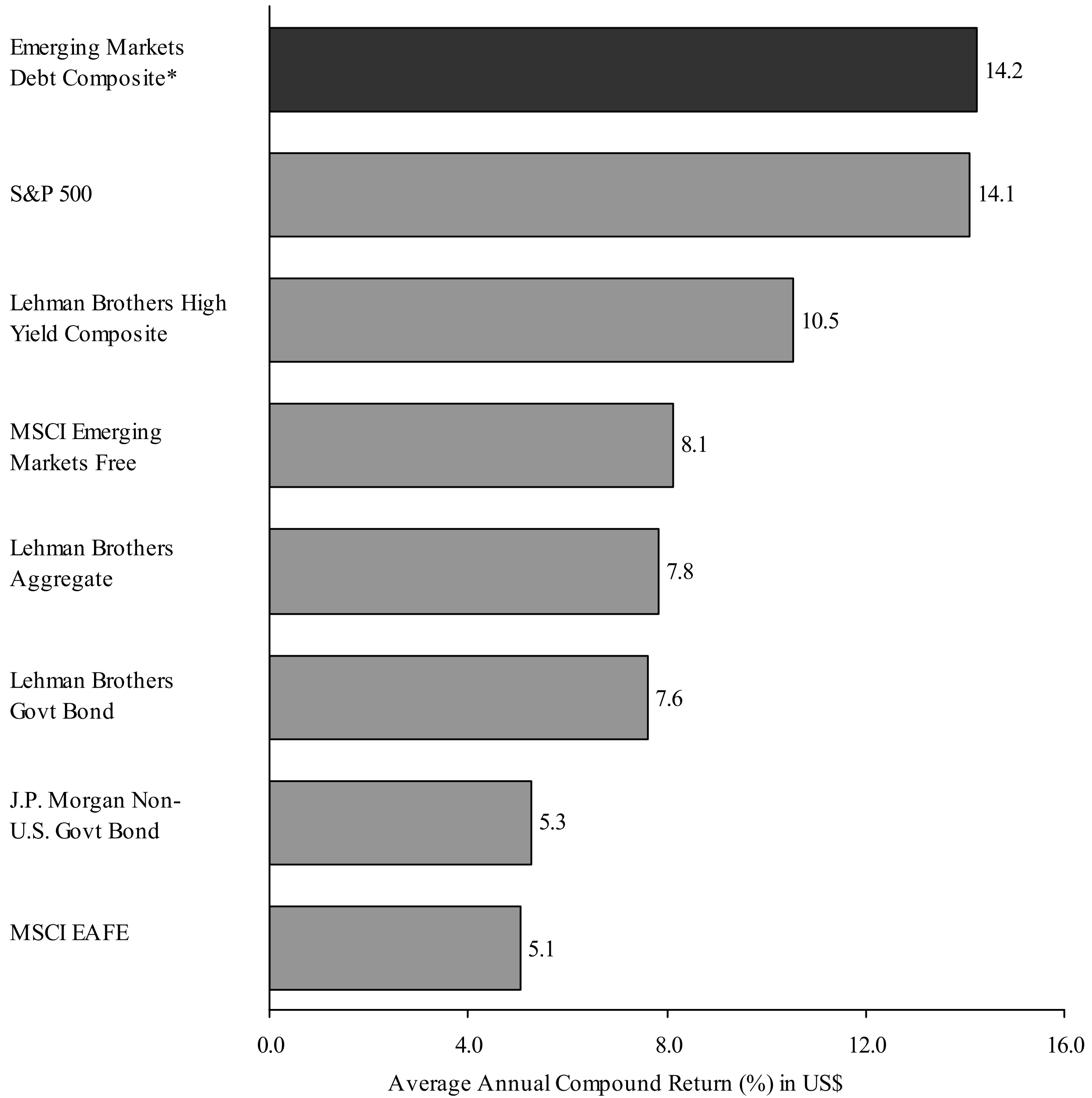
[1] The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

[2] Data begin January 1, 1994.

Exhibit 13

AVERAGE ANNUAL COMPOUND RETURNS OF SELECTED MARKET INDEXES

January 1, 1991 - March 31, 2002



Sources: The Bloomberg, Lehman Brothers, Inc., Standard & Poor's, and Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

* The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

Exhibit 14

RETURNS FOR SELECTED INDEXES

As of March 31, 2002

	Annual Total Returns (%)											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Emerging Markets Debt Composite Index*	38.80	6.98	44.16	-18.93	26.38	35.24	11.95	-11.55	24.19	14.40	1.36	5.78
J.P. Morgan Emerging Markets Bond Index	38.80	6.98	44.16	-18.68	27.54	34.16	16.15	-11.04	21.56	14.64	14.80	7.92
J.P. Morgan Emerging Markets Bond Index Plus	---	---	---	-18.93	26.77	39.31	13.02	-14.35	25.98	15.66	-0.79	6.55
J.P. Morgan Emerging Markets Bond Index Global	---	---	---	---	26.38	35.24	11.95	-11.55	24.19	14.40	1.36	5.78
J.P. Morgan Emerging Local Markets Index Plus	---	---	---	5.95	11.09	10.37	-7.38	18.39	12.47	2.00	3.16	1.68
J.P. Morgan Non-U.S. Goverent Bond Index	15.88	1.59	14.53	4.93	21.12	5.34	-3.84	18.29	-6.17	-2.47	-3.58	-1.78
Lehman Brothers Aggregate Bond	16.00	7.40	9.75	-2.92	18.47	3.63	9.65	8.69	-0.82	11.63	8.44	0.09
Lehman Brothers Government Bond	15.32	7.23	10.66	-3.38	18.34	2.77	9.59	9.85	-2.23	13.24	7.23	-0.63
Lehman Brothers High-Yield Bond	46.18	15.75	17.12	-1.03	19.17	11.35	12.76	1.87	2.39	-5.86	5.28	1.68
S&P 500	30.47	7.62	10.08	1.32	37.58	22.96	33.36	28.58	21.04	-9.11	-11.88	0.28
MSCI EAFE	12.13	-12.17	32.56	7.78	11.21	6.05	1.78	20.00	26.96	-14.17	-21.44	0.51
MSCI Emerging Markets Free	59.91	11.40	74.84	-7.32	-5.21	6.03	-11.59	-25.34	66.41	-30.61	-2.37	11.41

	Average Annual Compound Returns (%) through Calendar Year (12/31/01)									
	11 years	10 years	9 years	8 years	7 years	6 years	5 years	4 years	3 years	2 years
Emerging Markets Debt Composite Index*	14.01	11.79	12.33	8.88	13.57	11.57	7.35	6.24	12.92	7.68
J.P. Morgan Emerging Markets Bond Index	15.60	13.50	14.25	10.97	16.01	14.20	10.58	9.22	16.96	14.72
J.P. Morgan Emerging Markets Bond Index Plus	---	---	---	9.07	13.80	11.77	6.95	5.48	13.07	7.12
J.P. Morgan Emerging Markets Bond Index Global	---	---	---	---	13.57	11.57	7.35	6.24	12.92	7.68
J.P. Morgan Emerging Local Markets Index Plus	---	---	---	6.75	6.86	6.17	5.35	8.80	5.77	2.58
J.P. Morgan Non-U.S. Goverent Bond Index	5.55	4.57	4.90	3.76	3.59	0.93	0.07	1.07	-4.09	-3.03
Lehman Brothers Aggregate Bond	8.00	7.23	7.21	6.90	8.38	6.79	7.43	6.88	6.28	10.02
Lehman Brothers Government Bond	7.86	7.14	7.13	6.70	8.22	6.62	7.40	6.86	5.89	10.20
Lehman Brothers High-Yield Bond	10.62	7.58	6.70	5.47	6.43	4.44	3.11	0.83	0.49	-0.45
S&P 500	14.43	12.94	13.54	13.98	15.92	12.65	10.70	5.66	-1.03	-10.51
MSCI EAFE	5.14	4.46	6.49	3.62	3.04	1.74	0.89	0.68	-5.05	-17.89
MSCI Emerging Markets Free	7.25	3.05	2.16	-4.48	-4.06	-3.87	-5.74	-4.22	4.08	-17.69

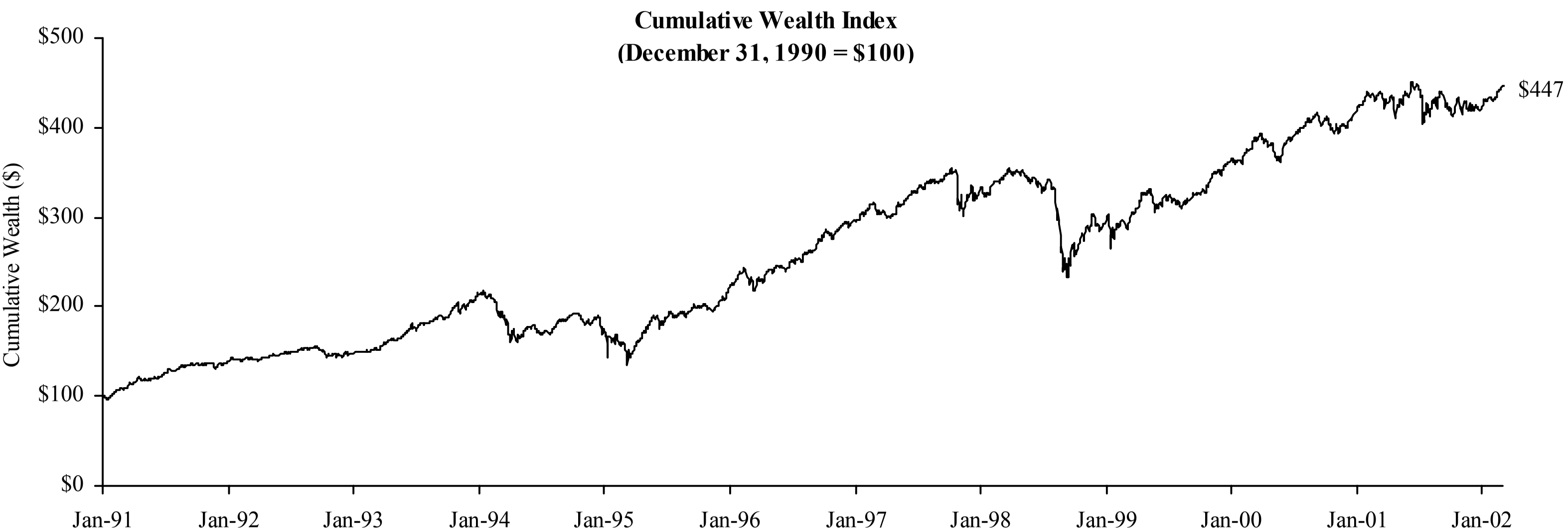
Sources: The Bloomberg, Lehman Brothers, Inc., Standard & Poor's, and Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

* The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

Exhibit 15

EMERGING MARKETS DEBT COMPOSITE INDEX* PEAK TO TROUGH DECLINES AND TIME TO RECOVER

January 1, 1991 - March 31, 2002



Date of Peak	Stripped Yield Spread at Peak (bps)	Blended Yield at Peak (%)	Percent Change (%) Peak to Trough	Date of Trough	Stripped Yield Spread at Trough (bps)	Blended Yield at Trough (%)	Time to Recover (months)
January 13, 1994	942	8.52	-25.95	April 21, 1994	1,503	12.69	14.1
October 3, 1994	1,468	13.06	-30.04	March 9, 1995	2,612	20.08	2.8
October 7, 1997	915	8.45	-14.92	November 12, 1997	1,242	10.81	3.0
March 23, 1998	1,005	9.15	-34.16	September 10, 1998	1,963	15.34	10.4

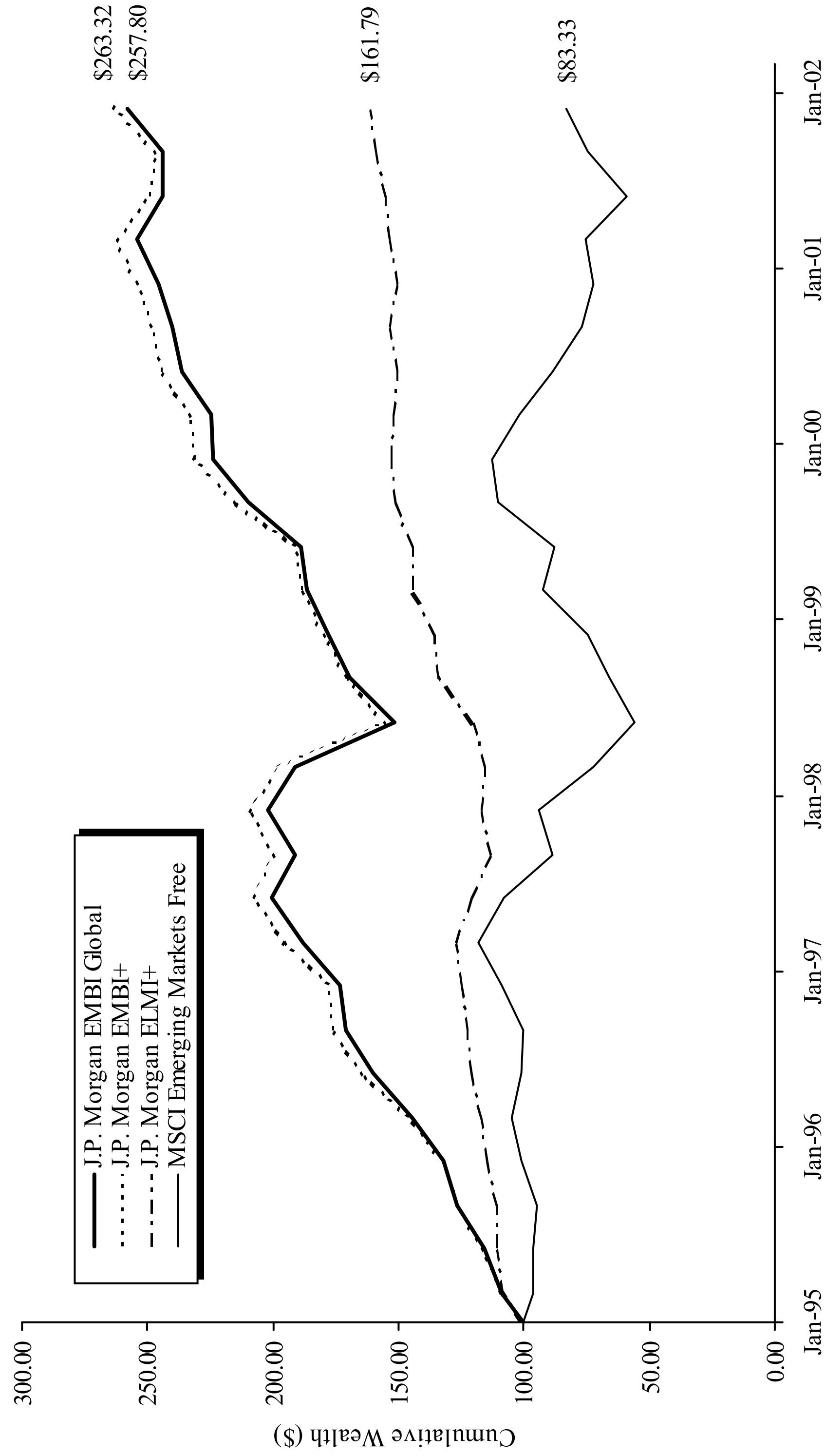
Sources: The Bloomberg, J.P. Morgan Securities, Inc., and Thomson Financial Datastream.

* The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

Exhibit 16

CUMULATIVE WEALTH OF EMERGING MARKETS DEBT AND EQUITY

First Quarter 1995 - First Quarter 2002



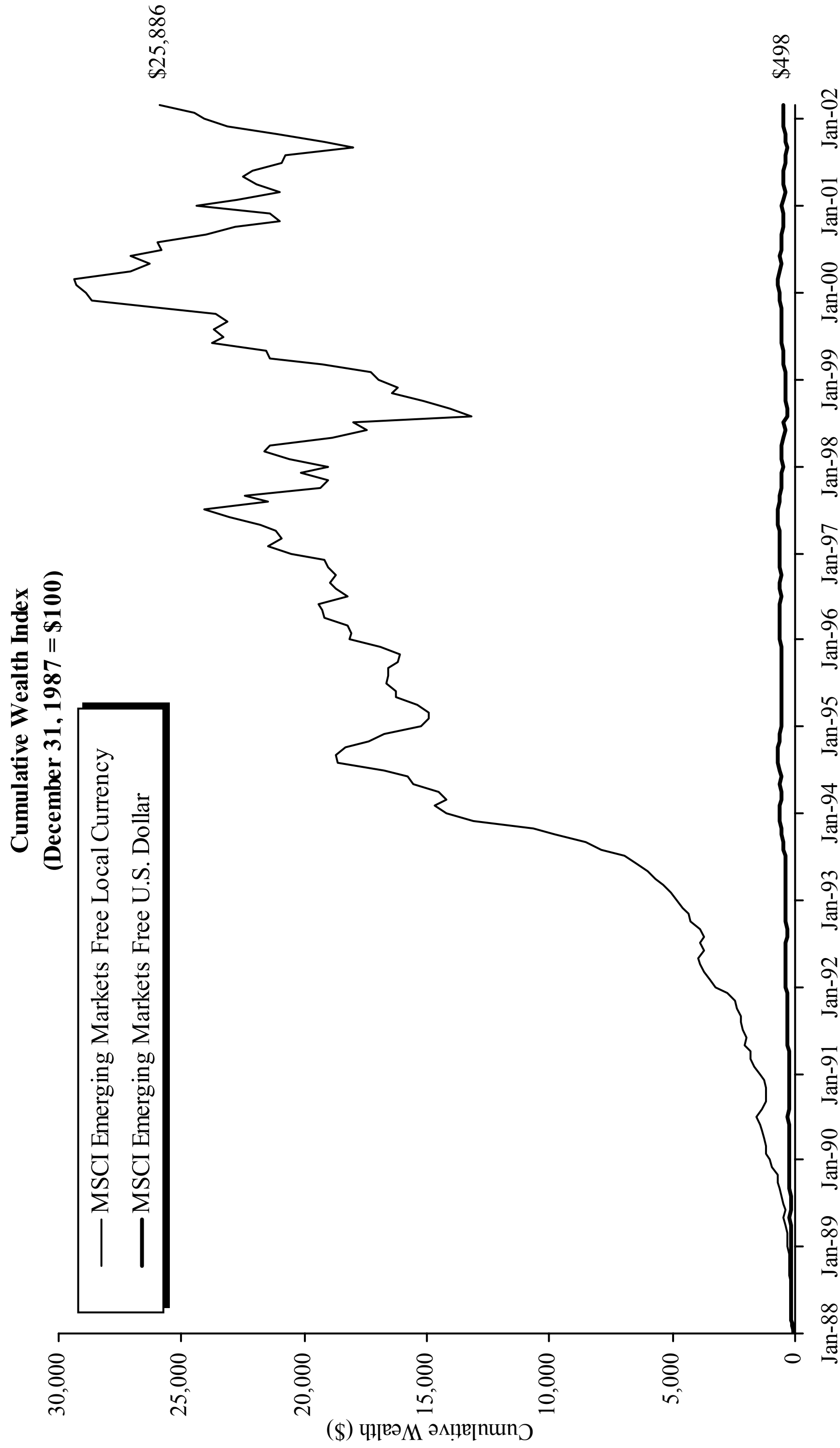
Source: Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

Exhibit 17

CUMULATIVE WEALTH OF EMERGING MARKETS EQUITY IN LOCAL CURRENCY AND U.S. DOLLARS

January 1, 1988 - March 31, 2002

Cumulative Wealth Index
(December 31, 1987 = $100)

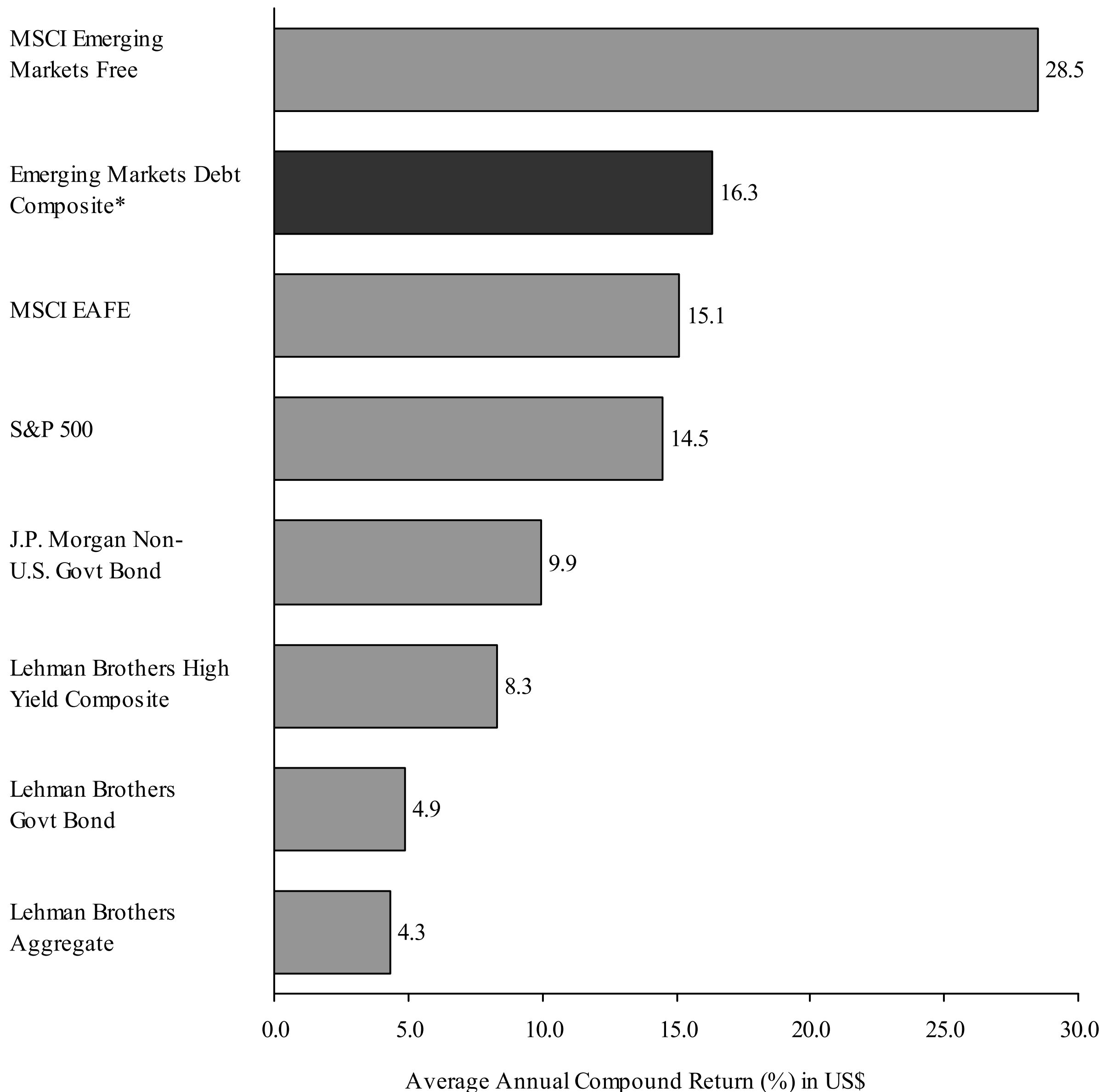


Source: Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

Exhibit 18

ANNUALIZED STANDARD DEVIATIONS OF SELECTED MARKET INDEXES

January 1, 1991 - March 31, 2002



Sources: The Bloomberg, Lehman Brothers, Inc., Standard & Poor's, and Thomson Financial Datastream. MSCI data are copyrighted by and proprietary to Morgan Stanley Capital International, Inc.

Note: Calculations are based on quarterly returns.

* The Emerging Markets Debt Composite Index is composed of the J.P. Morgan EMBI (January 1991 - December 1993), J.P. Morgan EMBI+ (January 1994 - December 1994), and J.P. Morgan EMBI Global (January 1995 - present).

Exhibit 19

EMERGING MARKETS DEBT MANAGER FEES

As of March 31, 2002

		Fee charged per size of account (%)				
Manager	Minimum Account Size	$5 mm	$10 mm	$25 mm	$50 mm	$100 mm
AllianceBernstein Instl Investment Mgmt	$20 mm	---	---	0.56	0.49	0.42
Ashmore Invst Mgmt Ltd - Local Currency	$25 mm	---	---	1.50	1.50	1.50
Ashmore Invst Mgmt Ltd - Liquid Investment	$25 mm	---	---	1.25	1.25	1.25
Bear Stearns Asset Management	$15 mm	---	---	0.50	0.50	0.43
Capital Guardian Trust Company	$50 mm	---	---	---	0.63	0.53
Citigroup Asset Management	$25 mm	---	---	0.70	0.70	0.66
Deutsche Asset Management	$30 mm	---	---	---	0.70	0.94
Fidelity Management Trust Company *	$50 mm	---	---	---	0.65	0.58
Grantham, Mayo, Van Otterloo & Co *	$1 mm	0.56	0.56	0.56	0.56	0.56
HSBC Asset Management (Americas)	$20 mm	---	---	0.95	0.85	0.68
JPMorgan Fleming Asset Management	$35 mm	---	---	---	0.60	0.50
Lazard Asset Management	$25 mm	---	---	1.25	1.08	0.99
MFS Institutional Advisors	$25 mm	---	---	0.45	0.40	0.35
Morgan Stanley Investment Management	$50 mm	---	---	---	0.55	0.53
OFFITBANK	$10 mm	---	0.70	0.70	0.63	0.51
Pacific Investment Management Company	$50 mm	---	---	---	0.45	0.45
Payden & Rygel	$10 mm	---	0.40	0.40	0.40	0.38
Schroder Investment Management	$20 mm	---	---	0.75	0.75	0.70
T. Rowe Price International, Inc	$20 mm	---	---	0.75	0.68	0.59
TCW Group - Emerging Markets FI	$20 mm	---	---	0.63	0.63	0.56
TCW Group - Worldwide Opportunity *	$3 mm	2.00	2.00	2.00	2.00	2.00
Templeton Worldwide, Inc	$20 mm	---	---	0.70	0.70	0.69
UBS Global Asset Management	$25 mm	---	---	0.65	0.65	0.63
Wellington Management Co, LLC	$10 mm	---	---	0.65	0.60	0.55
Western Asset Management Company	$50 mm	---	---	---	0.40	0.35
Mean		1.28	0.92	0.83	0.73	0.69
Median		1.28	0.63	0.70	0.63	0.56

Note: Fee excludes custody unless otherwise noted.

* Fee includes custody.

Exhibit 20

EMERGING MARKETS DEBT CLOSED-END FUNDS

As of March 31, 2002

Manager/Fund	Inception	Assets ($ mm)	Expense Ratio (3)	Market Return 1-Year AACR	Market Return 3-Year AACR	NAV Return 1-Year AACR	NAV Return 3-Year AACR	Premium/ Discount
AllianceBernstein Instl. Investment Mgmt.								
Alliance World Govt. Income Fund (1)	11/05/92	$95.0	1.5%	11.9	12.9	15.6	19.5	2.8%
Alliance World Govt. Income Fund II (2)	07/27/93	$823.7	1.3%	27.0	21.8	16.2	21.8	-2.5%
Citigroup Asset Management								
Emerging Markets Floating Rate Fund (2)	03/25/94	$53.1	2.5%	12.2	14.9	21.1	19.9	-2.4%
Emerging Markets Income Fund	10/30/92	$55.5	3.4%	20.8	24.4	22.8	24.2	8.1%
Emerging Markets Income Fund II	06/25/93	$277.5	3.5%	22.4	27.4	22.0	25.8	10.4%
Salomon Brothers Worldwide Income (2)	12/31/93	$173.4	2.6%	18.9	26.5	18.3	23.9	3.6%
Deutsche Asset Management								
Scudder Global High Income Fund	07/31/92	$66.8	3.0%	35.0	22.3	21.3	18.6	-2.7%
Morgan Stanley Investment Management								
Morgan Stanley Emerging Markets Debt	07/23/93	$190.2	1.4%	28.4	17.1	19.2	20.6	-5.3%
Morgan Stanley Global Opportunities (2)	05/27/94	$30.0	3.0%	-6.0	5.0	-7.5	1.7	-0.4%
Templeton Worldwide, Inc.								
Templeton Emerging Markets Income	09/23/93	$567.3	1.2%	26.1	19.9	18.7	15.6	-2.7%
UBS Global Asset Management								
Global High Income Dollar	10/31/93	$294.1	1.4%	20.8	22.6	12.1	14.3	-1.2%
Mean	07/20/93	$238.8	2.3%	19.8	19.5	16.3	18.7	0.7%
Median	07/27/93	$173.4	2.5%	20.8	21.8	18.7	19.9	-1.2%
J.P. Morgan EMBI Global	01/01/95	---	---	4.8	13.1	4.8	13.1	---

Sources: Fund families, Barron's/Lipper Mutual Fund Quarterly, and The Bloomberg.

Note: All Funds are listed on the New York Stock Exchange.
(1) The fund may also purchase U.S. Government zero-coupon bonds.
(2) The fund may also purchase U.S. high-yield bonds.
(3) The expense ratio is based on net asset value.

Exhibit 21

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS

Annual Total Returns

Manager	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	3 mos. 2002
AllianceBernstein Instl Investment Mgmt	---	74.3	-31.5	37.7	47.2	19.7	-21.6	36.8	16.7	9.3	9.7
Ashmore Invst Mgmt Ltd - Local Country Debt	---	---	---	---	---	---	-24.0	62.4	43.5	16.0	8.7
Bear Stearns Asset Management	---	---	---	---	44.2	17.0	-9.4	20.8	15.7	10.6	5.5
Capital Guardian Trust Company	---	---	---	---	42.1	12.9	-5.0	25.3	9.2	13.0	7.5
Citigroup Asset Management	11.1	58.1	-10.3	28.9	41.9	16.8	-15.5	27.7	15.9	12.9	7.6
Deutsche Asset Management	---	---	-5.6	26.5	45.2	14.8	-17.6	29.8	20.7	5.9	7.4
Fidelity Management Trust Company	---	---	---	18.4	47.4	20.3	-20.9	36.8	15.4	7.1	7.6
Grantham, Mayo, Van Otterloo & Company	---	---	---	45.8	66.6	31.7	-30.1	33.1	24.7	14.8	9.4
HSBC Asset Management (Americas) Inc.	---	---	---	---	---	---	---	28.9	16.3	8.9	5.9
JPMorgan Fleming Asset Management	---	---	---	---	---	10.8	-20.9	30.3	15.5	6.8	7.5
Lazard Asset Management	---	---	---	---	---	1.7	6.8	15.5	10.0	8.3	3.5
MFS Institutional Advisors	---	---	---	---	---	---	-16.7	30.8	16.1	21.3	9.5
Morgan Stanley Investment Management	---		-22.4	27.2	47.0	18.2	-20.9	32.0	12.9	12.9	7.1
OFFITBANK	---	29.7	-5.8	22.8	27.2	11.8	-12.1	28.6	8.9	4.2	3.0
Pacific Investment Management Company	---	---	---	---	---	---	-11.0	27.6	15.6	29.3	7.6
Payden & Rygel	---	---	---	---	---	13.5	-7.5	24.5	13.4	14.7	5.5
Schroder Investment Mgmt North America	---	---	---	---	22.4	3.7	0.3	30.0	17.6	3.3	3.2
T. Rowe Price International, Inc. (n)	---	---	---	27.3	38.2	18.2	-23.1	23.0	15.2	9.4	6.5
TCW Group - Emerging Markets FI	---	---	---	26.1	49.7	16.3	-23.5	33.8	11.4	17.7	5.1
TCW Group - Worldwide Opportunity	10.9	70.3	-4.7	15.9	49.1	24.4	-33.6	37.9	4.0	16.5	12.2
Templeton Worldwide, Inc.	---	---	---	---	---	---	-2.6	13.0	13.5	12.4	6.8
UBS Global Asset Management	---	---	---	---	45.3	20.0	-13.2	31.9	17.1	11.0	7.4
Wellington Management Company, LLP	---	---	---	---	---	---	---	---	16.4	12.1	7.9
Western Asset Management Company	---	---	---	---	---	14.2	-14.4	30.8	13.2	8.6	7.1
Mean	---	58.1	-13.4	27.7	43.8	15.9	-15.3	30.1	15.8	12.0	7.0
Median	---	64.2	-8.0	26.9	45.3	16.5	-16.1	30.0	15.5	11.5	7.4
J.P. Morgan EMBI	7.0	44.2	-18.7	27.5	34.2	16.2	-11.0	21.6	14.6	14.8	7.9
J.P. Morgan EMBI+	---	---	-18.9	26.8	39.3	13.0	-14.4	26.0	15.7	-0.8	6.6
J.P. Morgan EMBI Global	---	---	---	26.4	35.2	11.9	-11.5	24.2	14.4	1.4	5.8
J.P. Morgan ELMI+	---	---	5.9	11.1	10.4	-7.4	18.4	12.5	2.0	3.2	1.7

(n) Net return.

Exhibit 21 (continued)

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS

Average Annual Compound Returns (%)
Periods Ended March 31, 2002

Manager	10 Yr	9 Yr	8 Yr	7 Yr	6 Yr	5 Yr	4 Yr	3 Yr	2 Yr	1 Yr
AllianceBernstein Instl Investment Mgmt	---	15.8	16.6	22.0	16.5	11.9	8.8	22.4	11.9	18.5
Ashmore Invst Mgmt Ltd - Local Country Debt	---	---	---	---	---	18.8	20.4	39.7	29.4	21.3
Bear Stearns Asset Management	---	---	---	---	15.1	11.2	8.7	16.2	11.4	12.8
Capital Guardian Trust Company	---	---	---	---	15.5	11.6	10.4	16.6	11.6	20.0
Citigroup Asset Management	17.1	17.3	17.1	19.8	15.7	12.0	9.6	19.9	14.2	16.9
Deutsche Asset Management	---	---	16.9	19.6	15.4	10.4	8.7	19.3	11.1	10.8
Fidelity Management Trust Company	---	---	15.4	20.1	16.2	11.2	7.9	19.3	10.7	12.9
Grantham, Mayo, Van Otterloo & Company	---	---	---	26.1	20.1	13.0	8.3	25.9	17.0	21.4
HSBC Asset Management (Americas) Inc.	---	---	---	---	---	---	---	18.3	10.2	12.3
JPMorgan Fleming Asset Management	---	---	---	---	---	8.2	6.6	17.8	10.1	12.9
Lazard Asset Management	---	---	---	---	---	8.2	10.2	11.2	8.3	9.6
MFS Institutional Advisors	---	---	---	---	---	13.4	12.1	24.5	18.7	28.4
Morgan Stanley Investment Management	---	---	16.6	20.6	15.5	10.2	7.7	19.6	12.6	19.0
OFFITBANK	---	11.4	11.1	12.6	10.2	7.5	5.7	12.0	4.8	3.5
Pacific Investment Management Company	---	---	---	---	---	---	14.5	24.9	22.9	32.6
Payden & Rygel	---	---	---	---	---	12.2	13.3	17.6	12.7	17.4
Schroder Investment Mgmt North America	---	---	---	14.5	12.1	10.6	12.4	15.6	9.0	5.5
T. Rowe Price International, Inc. (n)	---	---	---	15.9	12.6	7.9	4.7	17.0	11.1	12.8
TCW Group - Emerging Markets FI	---	---	---	19.8	14.8	9.6	7.1	19.8	14.1	22.0
TCW Group - Worldwide Opportunity	15.0	16.3	15.7	18.4	13.4	6.8	4.9	21.5	10.6	28.5
Templeton Worldwide, Inc.	---	---	---	---	---	---	9.6	14.4	13.8	19.2
UBS Global Asset Management	---	---	---	---	17.7	13.4	10.6	19.9	13.7	16.4
Wellington Management Company, LLP	---	---	---	---	---	---	---	---	14.0	18.3
Western Asset Management Company	---	---	---	---	---	10.3	8.6	16.8	10.6	14.6
Mean	---	15.2	15.6	19.0	15.1	10.9	9.6	19.6	13.1	17.0
Median	---	16.1	16.6	19.8	15.5	10.9	8.7	19.3	11.7	17.2
J.P. Morgan EMBI	14.2	14.3	15.0	19.3	14.9	12.0	9.9	17.9	15.3	20.5
J.P. Morgan EMBI+	---	---	13.3	16.8	12.2	8.1	5.8	13.6	6.6	3.6
J.P. Morgan EMBI Global	---	---	---	16.3	11.8	8.3	6.3	13.1	7.3	4.8
J.P. Morgan ELMI+	---	---	7.1	6.7	5.9	5.2	8.3	5.9	2.8	7.5

(n) Net return.

Exhibit 22

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS: PORTFOLIO DIVERSIFICATION BY COUNTRY (%)

As of March 31, 2002

	JPMorgan EMBIG	**JPMorgan ELMI+**	Alliance Bernstein	Ashmore (Local Currency)	Ashmore (Liquid Investment)	Bear Stearns	Capital Guardian	Citigroup
Argentina	1.8	1.8	---	---	---	2.4	0.8	2.0
Brazil	20.9	2.1	26.9	1.9	17.0	10.8	11.3	21.9
Chile	0.6	2.1	---	---	---	1.0	---	---
Colombia	3.0	2.0	2.6	4.6	0.1	4.7	---	1.7
Costa Rica	---	---	---	---	---	---	---	1.1
Dominican Republic	0.3	---	0.5	---	---	0.4	2.8	---
Ecuador	1.3	---	2.2	---	3.7	3.7	0.1	5.7
Jamaica	---	---	---	---	---	---	1.8	---
Mexico	19.2	10.3	14.2	---	5.9	12.0	11.3	17.8
Panama	2.0	---	2.1	---	0.3	3.3	4.8	1.8
Peru	1.6	---	1.8	---	---	2.4	3.8	3.3
Uruguay	0.2	---	---	---	---	1.9	---	1.4
Venezuela	4.4	3.3	4.2	3.0	7.5	9.3	0.1	2.8
Other Latin America	---	---	0.8	---	0.9	---	4.0	---
Total Latin America	**55.3**	**21.6**	**55.3**	**9.5**	**35.2**	**51.7**	**39.0**	**59.4**
Bulgaria	2.1	---	0.3	5.3	0.7	3.2	3.2	4.1
Czech Republic	---	5.5	---	---	---	---	---	---
Hungary	0.4	4.5	---	0.1	---	---	1.3	---
Iraq	---	---	---	---	0.5	---	---	---
Israel	---	4.4	---	---	---	---	---	---
Poland	1.9	6.7	---	15.2	---	1.9	6.1	---
Qatar	---	---	---	---	---	---	---	---
Romania	---	---	---	2.3	0.9	---	---	---
Russia	14.6	---	25.1	18.0	15.0	9.5	20.4	20.6
Slovakia	---	2.1	---	---	---	---	---	---
Turkey	3.5	8.5	3.9	7.7	2.1	5.3	2.4	4.7
Ukraine	0.5	---	1.0	5.1	2.8	0.9	3.4	---
Yugoslavia	---	---	---	4.0	1.4	---	---	---
Other Europe\Mideast	2.3	---	---	---	0.8	0.6	---	---
Total Europe\Mideast	**25.3**	**31.8**	**30.2**	**57.7**	**23.6**	**22.5**	**37.0**	**29.5**
China	1.7	2.0	---	---	3.4	0.1	---	---
Hong Kong	---	9.8	---	2.5	1.5	---	---	---
India	---	2.0	---	0.8	0.4	---	---	---
Indonesia	---	---	---	6.8	4.8	---	0.3	---
Korea	4.9	2.0	2.0	9.8	8.4	3.7	1.9	---
Malaysia	3.8	---	---	---	2.9	4.2	---	---
Philippines	3.9	2.0	5.1	---	3.3	4.9	1.5	4.1
Singapore	---	9.8	---	---	---	---	---	---
Taiwan	---	2.0	---	---	---	---	---	---
Thailand	0.3	9.9	---	1.0	5.6	0.5	0.3	---
Vietnam	---	---	---	---	---	---	---	---
Other Asia\Pacific	---	---	---	1.0	0.7	---	---	---
Total Asia\Pacific	**14.6**	**39.4**	**7.1**	**21.8**	**30.8**	**13.5**	**4.0**	**4.1**
Algeria	0.3	---	---	8.7	4.5	0.8	---	---
Egypt	0.8	1.8	---	---	---	1.1	0.3	---
Ivory Coast	0.1	---	---	---	---	0.1	---	---
Morocco	0.8	---	---	---	1.5	1.3	---	3.6
Nigeria	1.8	---	---	---	3.2	2.7	2.1	---
South Africa	1.1	5.4	---	2.4	---	1.3	---	---
Other Africa	---	---	---	---	0.1	---	---	---
Total Africa	**4.8**	**7.2**	**---**	**11.1**	**9.2**	**6.2**	**2.1**	**3.6**
Developed Markets *	**---**	**---**	**6.4**	**---**	**1.1**	**---**	**8.8**	**---**
Cash	**---**	**---**	**0.9**	**---**	**---**	**6.2**	**9.2**	**3.5**

* Developed Markets represents Luxembourg, Switzerland, The Netherlands, United Kingdom, and/or United States.

Exhibit 22 (continued)

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS: PORTFOLIO DIVERSIFICATION BY COUNTRY (%)

As of March 31, 2002

	JPMorgan EMBIG	**JPMorgan ELMI+**	Deutsche	GMO	HSBC	JPMorgan Fleming	Lazard	MFS
Argentina	1.8	1.8	---	3.2	---	2.4	1.5	---
Brazil	20.9	2.1	23.7	18.3	20.0	24.1	---	21.1
Chile	0.6	2.1	---	---	---	---	3.5	1.4
Colombia	3.0	2.0	2.5	1.0	3.4	3.3	1.5	1.4
Costa Rica	---	---	---	0.1	---	---	5.5	---
Dominican Republic	0.3	---	1.9	2.4	---	---	---	1.5
Ecuador	1.3	---	5.0	1.7	4.8	3.5	---	3.2
Jamaica	---	---	---	1.0	---	---	---	---
Mexico	19.2	10.3	18.0	15.1	10.8	15.6	7.0	9.1
Panama	2.0	---	---	2.2	---	1.8	---	2.3
Peru	1.6	---	1.8	2.1	5.2	3.7	3.5	2.2
Uruguay	0.2	---	1.8	---	6.1	0.9	---	1.2
Venezuela	4.4	3.3	3.9	4.3	3.7	3.4	---	1.7
Other Latin America	---	---	---	1.3	---	---	---	---
Total Latin America	**55.3**	**21.6**	**58.6**	**51.7**	**54.0**	**58.6**	**22.5**	**45.1**
Bulgaria	2.1	---	2.9	6.6	---	2.8	---	2.0
Czech Republic	---	5.5	---	---	---	---	5.0	---
Hungary	0.4	4.5	---	---	---	---	8.0	---
Iraq	---	---	---	---	---	---	---	---
Israel	---	4.4	---	---	---	---	1.0	---
Poland	1.9	6.7	---	---	---	---	6.5	1.1
Qatar	---	---	---	0.3	---	---	---	---
Romania	---	---	---	---	---	---	2.0	---
Russia	14.6	---	21.5	22.1	17.7	17.2	5.0	16.6
Slovakia	---	2.1	---	---	---	---	6.5	---
Turkey	3.5	8.5	3.5	0.6	7.2	5.3	7.0	3.2
Ukraine	0.5	---	2.8	0.3	5.0	2.7	---	3.1
Yugoslavia	---	---	---	0.6	---	---	---	---
Other Europe\Mideast	2.3	---	---	2.3	---	---	1.0	---
Total Europe\Mideast	**25.3**	**31.8**	**30.7**	**33.0**	**29.9**	**28.0**	**42.0**	**26.0**
China	1.7	2.0	---	---	---	---	---	---
Hong Kong	---	9.8	---	---	---	---	---	---
India	---	2.0	---	---	---	---	5.0	---
Indonesia	---	---	---	0.8	---	---	1.0	---
Korea	4.9	2.0	---	0.7	---	---	6.0	1.8
Malaysia	3.8	---	---	---	---	---	---	---
Philippines	3.9	2.0	4.1	1.5	3.2	3.3	6.0	3.8
Singapore	---	9.8	---	---	---	---	---	---
Taiwan	---	2.0	---	---	---	---	---	---
Thailand	0.3	9.9	---	---	---	---	2.3	---
Vietnam	---	---	---	1.4	2.1	---	---	---
Other Asia\Pacific	---	---	---	---	---	0.7	---	3.0
Total Asia\Pacific	**14.6**	**39.4**	**4.1**	**4.4**	**5.3**	**4.0**	**20.3**	**8.6**
Algeria	0.3	---	---	4.3	2.9	---	---	3.4
Egypt	0.8	1.8	---	0.2	---	---	---	---
Ivory Coast	0.1	---	2.2	2.5	2.3	---	---	---
Morocco	0.8	---	---	1.1	---	0.2	---	---
Nigeria	1.8	---	---	3.3	---	0.6	---	---
South Africa	1.1	5.4	---	---	---	---	3.5	---
Other Africa	---	---	---	0.2	---	---	1.7	---
Total Africa	**4.8**	**7.2**	**2.2**	**11.4**	**5.2**	**0.8**	**5.2**	**3.4**
Developed Markets *	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**7.8**
Cash	**---**	**---**	**4.1**	**-0.5**	**5.6**	**8.5**	**10.0**	**9.1**

* Developed Markets represents Luxembourg, Switzerland, The Netherlands, United Kingdom, and/or United States.

Exhibit 22 (continued)

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS: PORTFOLIO DIVERSIFICATION BY COUNTRY (%)

As of March 31, 2002

	JPMorgan EMBIG	JPMorgan ELMI+	Morgan Stanley	OFFITBANK	PIMCO	Schroder	T. Rowe Price Intl.	TCW Emerging Markets FI
Argentina	1.8	1.8	3.0	---	---	6.0	3.6	---
Brazil	20.9	2.1	24.9	39.3	32.4	4.1	24.0	14.1
Chile	0.6	2.1	---	2.4	---	---	---	2.4
Colombia	3.0	2.0	2.1	---	---	---	2.7	5.4
Costa Rica	---	---	---	---	---	---	0.6	---
Dominican Republic	0.3	---	1.1	---	---	---	---	2.3
Ecuador	1.3	---	0.6	---	4.1	---	2.2	2.3
Jamaica	---	---	---	---	---	---	---	---
Mexico	19.2	10.3	17.6	45.8	20.2	11.2	17.7	13.9
Panama	2.0	---	2.0	---	4.9	---	2.5	1.3
Peru	1.6	---	1.9	---	3.5	---	0.6	0.9
Uruguay	0.2	---	---	---	---	---	---	---
Venezuela	4.4	3.3	6.6	---	---	1.5	4.3	---
Other Latin America	---	---	---	---	---	---	---	---
Total Latin America	**55.3**	**21.6**	**59.6**	**87.5**	**65.1**	**22.9**	**58.2**	**42.5**
Bulgaria	2.1	---	2.3	---	3.3	1.6	4.7	3.0
Czech Republic	---	5.5	---	---	---	8.6	---	---
Hungary	0.4	4.5	---	---	---	8.5	---	---
Iraq	---	---	---	---	---	---	---	---
Israel	---	4.4	---	---	---	---	---	---
Poland	1.9	6.7	0.6	2.3	1.2	4.9	1.9	1.9
Qatar	---	---	0.9	---	1.5	---	---	---
Romania	---	---	---	---	---	2.3	---	---
Russia	14.6	---	18.2	---	17.9	---	16.9	15.2
Slovakia	---	2.1	---	---	---	---	---	---
Turkey	3.5	8.5	2.4	---	---	3.2	3.9	5.3
Ukraine	0.5	---	1.0	---	0.7	1.8	---	---
Yugoslavia	---	---	---	---	---	3.1	---	---
Other Europe\Mideast	2.3	---	0.7	---	0.4	---	---	---
Total Europe\Mideast	**25.3**	**31.8**	**27.6**	**2.3**	**24.9**	**34.1**	**27.4**	**28.4**
China	1.7	2.0	---	---	---	0.7	---	---
Hong Kong	---	9.8	---	---	---	---	---	2.2
India	---	2.0	---	---	---	1.1	---	1.9
Indonesia	---	---	1.1	---	---	2.2	---	---
Korea	4.9	2.0	3.9	---	1.2	---	1.3	3.4
Malaysia	3.8	---	1.7	---	4.5	0.6	1.1	4.9
Philippines	3.9	2.0	4.2	4.6	0.2	6.5	2.5	4.5
Singapore	---	9.8	---	---	---	---	---	---
Taiwan	---	2.0	---	---	---	---	---	---
Thailand	0.3	9.9	---	---	---	1.4	---	---
Vietnam	---	---	---	---	---	0.7	---	---
Other Asia\Pacific	---	---	---	---	---	---	---	---
Total Asia\Pacific	**14.6**	**39.4**	**10.9**	**4.6**	**5.9**	**13.3**	**4.9**	**16.9**
Algeria	0.3	---	0.8	---	---	---	0.9	1.4
Egypt	0.8	1.8	1.4	---	---	---	---	3.0
Ivory Coast	0.1	---	0.9	---	---	2.5	1.7	---
Morocco	0.8	---	2.6	---	0.3	---	---	---
Nigeria	1.8	---	1.1	---	0.7	---	1.8	---
South Africa	1.1	5.4	---	---	---	6.5	---	---
Other Africa	---	---	---	---	---	---	1.0	---
Total Africa	**4.8**	**7.2**	**5.3**	**---**	**1.0**	**9.0**	**5.4**	**1.4**
Developed Markets *	**---**	**---**	**---**	**---**	**---**	**---**	**0.9**	**0.6**
Cash	**---**	**---**	**-3.4**	**5.5**	**3.1**	**20.8**	**3.2**	**10.3**

* Developed Markets represents Luxembourg, Switzerland, The Netherlands, United Kingdom, and/or United States.

Exhibit 22 (continued)

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS: PORTFOLIO DIVERSIFICATION BY COUNTRY (%)

As of March 31, 2002

	JPMorgan EMBIG	**JPMorgan ELMI+**	TCW Worldwide Opportunity	Templeton	UBS	Wellington	Western Asset Mgmt
Argentina	1.8	1.8	---	---	3.2	---	2.0
Brazil	20.9	2.1	17.6	24.7	23.2	25.9	28.0
Chile	0.6	2.1	---	---	---	---	---
Colombia	3.0	2.0	---	3.8	3.9	2.6	3.0
Costa Rica	---	---	---	---	---	---	---
Dominican Republic	0.3	---	---	---	0.6	0.5	---
Ecuador	1.3	---	5.4	2.4	2.4	2.1	2.0
Jamaica	---	---	---	0.9	---	---	---
Mexico	19.2	10.3	7.6	17.0	14.9	20.1	24.0
Panama	2.0	---	---	2.4	1.5	2.5	2.0
Peru	1.6	---	1.0	---	2.2	2.1	3.0
Uruguay	0.2	---	---	---	---	---	1.0
Venezuela	4.4	3.3	1.4	5.0	3.2	4.6	1.0
Other Latin America	---	---	0.5	0.9	---	0.5	---
Total Latin America	**55.3**	**21.6**	**33.4**	**56.1**	**55.1**	**60.9**	**66.0**
Bulgaria	2.1	---	---	2.8	2.3	3.7	3.0
Czech Republic	---	5.5	---	---	---	---	---
Hungary	0.4	4.5	0.3	---	---	---	---
Iraq	---	---	---	---	---	---	---
Israel	---	4.4	0.7	---	---	---	---
Poland	1.9	6.7	---	---	2.5	---	---
Qatar	---	---	---	---	1.5	---	---
Romania	---	---	---	---	---	---	---
Russia	14.6	---	28.9	21.3	17.7	22.1	21.0
Slovakia	---	2.1	---	---	---	---	---
Turkey	3.5	8.5	0.2	6.7	2.8	4.1	---
Ukraine	0.5	---	0.4	---	2.0	1.3	1.0
Yugoslavia	---	---	0.1	---	---	---	---
Other Europe\Mideast	2.3	---	3.1	---	---	---	---
Total Europe\Mideast	**25.3**	**31.8**	**33.6**	**30.9**	**28.8**	**31.2**	**25.0**
China	1.7	2.0	1.6	---	---	---	---
Hong Kong	---	9.8	---	---	---	---	---
India	---	2.0	0.6	---	---	---	---
Indonesia	---	---	1.5	0.8	1.2	---	---
Korea	4.9	2.0	4.7	---	2.7	0.6	---
Malaysia	3.8	---	---	0.5	---	---	2.0
Philippines	3.9	2.0	1.4	6.8	5.2	3.3	4.0
Singapore	---	9.8	---	---	---	---	---
Taiwan	---	2.0	2.1	---	---	---	---
Thailand	0.3	9.9	0.0	---	---	---	---
Vietnam	---	---	---	---	---	0.3	---
Other Asia\Pacific	---	---	0.6	---	---	---	---
Total Asia\Pacific	**14.6**	**39.4**	**12.5**	**8.1**	**9.1**	**4.2**	**6.0**
Algeria	0.3	---	4.4	---	---	---	---
Egypt	0.8	1.8	---	---	---	---	---
Ivory Coast	0.1	---	3.0	---	0.3	---	---
Morocco	0.8	---	---	---	1.0	---	2.0
Nigeria	1.8	---	5.4	---	---	---	---
South Africa	1.1	5.4	---	---	---	0.5	---
Other Africa	---	---	0.5	---	---	---	---
Total Africa	**4.8**	**7.2**	**13.2**	**---**	**1.3**	**0.5**	**2.0**
Developed Markets *	**---**	**---**	**---**	**3.3**	**---**	**---**	**---**
Cash	**---**	**---**	**7.3**	**1.6**	**5.8**	**3.2**	**1.0**

* Developed Markets represents Luxembourg, Switzerland, The Netherlands, United Kingdom, and/or United States.

Exhibit 23

REPRESENTATIVE EMERGING MARKETS DEBT MANAGERS: PORTFOLIO DIVERSIFICATION BY ASSET TYPE (%)

As of March 31, 2002

Manager	Brady Bonds[1]	Sovereign Loans	Local Currency Sovereign	Local Currency Corporate	Eurobonds	Cash	Other
AllianceBernstein	7.2	---	---	5.1	86.8	0.9	---
Ashmore - Local Currency Debt	9.0	11.6	16.3	---	50.0	---	13.1 [2]
Ashmore - Liquid Investment Portfolio	25.4	16.6	1.4	---	48.7	---	7.8
Bear Stearns	27.7	3.6	---	---	62.2	6.2	0.3
Capital Guardian	---	83.6	---	7.1	---	9.2	0.2
Citigroup	25.8	---	---	---	67.2	3.5	3.6
Deutsche	43.0	---	---	---	52.9	4.1	---
GMO	48.4	6.6	---	---	43.3	-0.5	2.2
HSBC	20.0	---	---	---	74.4	5.6	---
JPMorgan Fleming	31.8	0.2	---	---	59.3	8.5	---
Lazard	---	---	8.4	---	---	10.0	81.6 [3]
MFS	10.4	3.7	---	---	55.3	9.1	21.5 [4]
Morgan Stanley	20.6	67.8	---	5.8	---	-3.4	9.2
OFFITBANK	4.3	---	---	---	90.2	5.5	---
PIMCO	23.0	0.3	---	---	---	3.1	73.6 [5]
Schroder	---	29.8	22.9	6.4	8.5	20.8	11.7 [6]
T. Rowe Price Intl	33.5	2.8	---	---	60.4	3.2	---
TCW - Emerging Markets FI	---	1.4	---	---	83.9	10.3	4.4
TCW - Worldwide Opportunity	11.6	9.9	4.5	---	30.3	7.3	36.5 [7]
Templeton	5.2	---	---	---	93.1	1.6	---
UBS	---	88.9	---	5.3	---	5.8	---
Wellington	20.5	---	---	---	76.3	3.2	---
Western Asset Management	34.0	2.0	---	---	63.0	1.0	---

[1] "Brady Bonds" includes pre-Brady Bonds, Brady Bonds, and other debt-restructuring instruments.
[2] Foreign trade obligations, promissory notes, corporate loans, Ministry of Finance, and currency swaps.
[3] Emerging currency forwards, structured notes, and supranational bonds.
[4] Emerging corporates and quasi-sovereign, etc.
[5] Global issues and credit default swaps.
[6] Asset-backed security, foreign currency sovereign, and foreign currency corporate.
[7] Equities and U.S. dollar-denominated corporates.

APPENDIX

EMERGING MARKETS DEBT INDEXES

Index	SALOMON BROTHERS BRADY BOND INDEX (SBBI)	J.P. MORGAN EMERGING MARKETS BOND INDEX (EMBI)
Inception and Composition	Daily historical levels are available from April 1990. Includes both collateralized and uncollateralized U.S. dollar-denominated Brady bonds. Bonds are selected for inclusion based on market capitalization. Only U.S. dollar-denominated bonds issued under the Brady Plan restructuring of commercial bank debt with a minimum size outstanding of $500 million are included.	Daily historical levels are available from December 1990. An index of U.S. dollar-denominated Brady and other similar sovereign restructured bonds. Bonds are selected based on tradability. Only instruments greater than $500 million and have a remaining maturity greater than 2.5 years are included. Countries must have a credit ceiling of BBB+/Baa1. To determine liquidity, bid-offer spreads must be less than 3/8 point for one month, 3/4 point average over three months, or 1 1/2 point average over six months. Unavailable or illiquid issues are excluded.
Countries	Latin America: Argentina, Brazil, Mexico, Panama, Peru, and Venezuela Europe/Mideast: Bulgaria and Poland Other: Ivory Coast, Nigeria, and Philippines	Latin America: Argentina, Brazil, Ecuador, Mexico, Panama, Peru, and Venezuela Europe/Mideast: Bulgaria, Poland, and Russia Other: Nigeria
Computation	Individual bond returns are calculated based on daily changes in price, coupon payment, and interest accrual. Index returns are then calculated by weighting these returns in proportion to market capitalization. Rebalancing is completed upon inclusion/exclusion of issues. Index is weighted by market capitalization. Total return index. Base date value: 100	Individual bond returns are calculated based on daily changes in bid prices and exact coupon accrual and payment conventions. These returns are weighted in proportion to market capitalization. Rebalancing is completed at the end of each month and when needed due to inclusion/exclusion of issues or upon government repurchase or cancellation of outstanding bonds. Index is weighted by market capitalization. Total return index. Base date value: 100
Subindexes	Fixed rate Floating rate Country indexes Latin American/Non-Latin American Collateralized/Uncollateralized	Fixed rate Floating rate Country indexes Latin American/Non-Latin American
Comments	Brady bonds, while a readily identifiable set of bonds, comprise only a portion of the emerging markets debt universe. The index does not capture pre-restructuring performance and therefore, excludes the large gains experienced by these bonds as they confirm Brady agreements. The index has changed its market capitalization requirement since inception. The index has an objective construction criteria and represents a widely known segment of the market, but in doing so sacrifices comprehensiveness.	Index published weekly with statistics. Comments on market performance published monthly. Includes only the sovereign portion of the emerging markets debt universe; however, the index will capture liquid issues of pre-Brady loan restructurings. The liquidity requirement has been changed since the index's inception.

EMERGING MARKETS DEBT INDEXES

Index	J.P. MORGAN EMERGING MARKETS BOND INDEX PLUS (EMBI+)	J.P. MORGAN EMERGING MARKETS BOND INDEX GLOBAL (EMBI Global)
Inception and Composition	Daily historical levels are available from December 1993. An index of traded external-currency-denominated debt instruments comprised of U.S. dollar- and other external-currency-denominated Brady Bonds, loans, eurobonds, and local market instruments. Bonds are selected based on tradability. Only instruments greater than $500 million and have a remaining maturity greater than 2.5 years are included. Countries must have a credit ceiling of BBB+/Baa1. To determine liquidity, bid-offer spreads must be less than 3/8 point for one month, 3/4 point average over three months, or 1 1/2 point average over six months. Unavailable or illiquid issues are excluded.	Daily historical levels are available from December 1993. An index of U.S. dollar-denominated Brady bonds, eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities. Bonds are selected based on availability of daily prices. Only U.S. dollar-denominated instruments greater than $500 million having a maturity greater than 2.5 years are included. Countries have to be either classified as having low or middle per capita income by the World Bank for the past two years, have restructured debt in the past ten years, or have currently restricted debt outstanding. Issues that do not have easily accessible and verifiable daily prices are excluded.
Countries	Latin America: Argentina, Brazil, Colombia, Ecuador, Mexico, Panama, Peru, and Venezuela Europe/Mideast: Bulgaria, Poland, Qatar, Russia, Turkey, and Ukraine Other: Morocco, Malaysia, Nigeria, Philippines, and South Korea	Latin America: Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Mexico, Panama, Peru, Uruguay, and Venezuela Europe/Mideast: Bulgaria, Croatia, Hungary, Lebanon, Pakistan, Poland, Russia, Turkey, and Ukraine Other: Algeria, China, Ivory Coast, Egypt, Malaysia, Morocco, Nigeria, Philippines, South Africa, South Korea, and Thailand
Computation	Individual bond returns are calculated based on daily changes in bid prices and exact coupon accrual and payment conventions. These returns are weighted in proportion to market capitalization. Rebalancing is completed at the end of each month and when needed due to inclusion/exclusion of issues or upon government repurchase or cancellation of outstanding bonds. Index is weighted by market capitalization. Total return index. Base date value: 100	Individual bond returns are calculated based on daily changes in bid prices and exact coupon accrual and payment conventions. These returns are weighted in proportion to market capitalization. Rebalancing is completed at the end of each month and when needed due to inclusion/exclusion of issues or upon government repurchase or cancellation of outstanding bonds. Index is weighted by market capitalization. Total return index. Base date value: 100
Subindexes	Instrument type Country indexes Latin American/Non-Latin American Geographic region	Instrument type Country indexes Latin American/Non-Latin American Geographic region Collateralized/Uncollateralized
Comments	Index published weekly with statistics. Comments on market performance published monthly. Includes corporate debt from member countries since rating agencies limit corporate external-currency debt ratings to the country's sovereign credit rating.	Index published weekly with statistics. Comments on market performance published monthly. Includes only debt instruments that have a cash flow structure from which verifiable daily returns can be calculated. Bid and offer prices must be available on a daily and timely basis. Euro-denominated issues will be reconsidered for inclusion in the index in the near future.

EMERGING MARKETS DEBT INDEXES

Index	J.P. MORGAN EMERGING LOCAL MARKETS INDEX PLUS (ELMI+)
Inception and Composition	Daily historical levels are available from December 1993. An index of local-currency-denominated money-market instruments. Countries are selected based on its relative export and import levels and market accessibility and liquidity. All countries except those classified by the World Bank as high-income OECD economies for the past consecutive five years are included. In addition, countries must have an export-plus-imports minimum of $10 billion, have at least one interchangeable investment vehicle offering foreign investors local interest rates and currency exposure, no investment restrictions to foreign investors, and at least two international dealers quoting two-way prices for the country's selected money-market instrument (FX forwards, deposits, or Treasury bills). Only instruments with maturities of one-, two-, and three-months are included.
Countries	Latin America: Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela Europe/Mideast: Czech Republic, Hungary, Israel, Poland, Slovak Republic, and Turkey Other: China, Egypt, Hong Kong, India, Philippines, Singapore, South Africa, South Korea, Taiwan, and Thailand
Computation	The index is weighted by a liquidity-sensitive system. For countries with convertible securities, weight per country is limited to no more than 10% of total index. For countries with nonconvertible currencies or impediments to investing onshore, weight per country is limited to more than 2% of total index. Returns are calculated on a daily basis in both U.S. dollar and local currency terms. These returns are constructed using a "ladder" of instruments initially investing in one-, two-, and three-month instruments. Each month, the proceeds of the maturing instrument are reinvested in a new three-month instrument. Rebalancing is completed at the end of June and December. Total return index. Base date value: 100
Subindexes	Country indexes Geographic region
Comments	Index published weekly with statistics. Comments on market performance published monthly. The use of only three maturity instruments makes the country subindexes easier to replace and involves fewer transaction costs.