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Synthetic ETFs Under the Microscope: A Global Study

Authors:

Ben Johnson, Director, European ETF Research

Hortense Bioy, CFA, Senior ETF Analyst

Jose Garcia-Zarate, Senior ETF Analyst

Jackie Choy, ETF Strategist, Asia

John Gabriel, ETF Strategist, Canada

Gordon Rose, CIIA, ETF Analyst

Alastair Kellett, CFA, CAIA, ETF Analyst



Contact

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Foreward

In this updated and expanded report, we build upon our original examination of synthetic exchange-traded funds (ETFs) in Europe, highlighting recent progress made by providers towards increasing the degree of investor protection within their products and the level of transparency around them.

- ▶ ETFs are a global product category and we have widened our field of study accordingly. We have included a detailed examination of synthetic ETFs in Asia, Canada, and Australia.
- ▶ The structural details of synthetic ETFs and the local regulations that they are subject to vary quite widely across geographies.
- ▶ However, certain key themes ring true around the globe. In all geographies we studied, the topics of transparency and security are top-of-mind for investors, providers, and regulators alike.
- ▶ Synthetic structures contain some unique sources of risk. In assessing the risks associated with these structures it is important to address three key questions:
 - ① What is the source of the risk?
 - ② How are investors being protected against this risk?
 - ③ How are investors being compensated for assuming this risk?
- ▶ Perhaps the most significant development we have seen in this space over the last twelve months has been the evolution of practices with respect to counterparty risk mitigation.
- ▶ We have also seen major improvements in the area of transparency.
- ▶ Regulatory scrutiny and unfavourable media coverage have forced providers to improve disclosure with regards to collateral and counterparty risk management.
- ▶ While a few providers were already fully transparent before the issue came onto the radar of international regulators, many others have increased their level of transparency in response to the pressure.
- ▶ There are a number of lingering issues that we feel the industry needs to address.
- ▶ We think there is still room for improvement as it pertains to the frequency and quality of public disclosure of the composition of collateral and substitute baskets.
- ▶ We would expect providers to give regular and full disclosure of the identity of swap counterparties as well as the amount of counterparty exposure on a fund by fund basis. However, this is not always the case.
- ▶ We think that collateral details should be made publicly available and updated daily.
- ▶ Providers of swap-based ETFs have generally not been forthcoming with details on the swap costs embedded within their products, and this remains an area needing improvement.
- ▶ Based on our analysis of Morningstar's asset flows data, it seems reasonable to infer a degree of causality between the barrage of bad publicity served against synthetic ETFs over the past twelve months and the concurrent net outflows from synthetic funds.

Foreward

In this updated and expanded report, we build upon our original examination of synthetic exchange-traded funds (ETFs) in Europe, highlighting recent progress made by providers towards increasing the degree of investor protection within their products and the level of transparency around them. ETFs are a global product category and we have widened our field of study accordingly. We have included a detailed examination of synthetic ETFs in Asia, Canada, and Australia. The structural details of synthetic ETFs and the local regulations that they are subject to vary quite widely across geographies; however, certain key themes ring true around the globe. In all regions we studied, the topics of transparency and security are top-of-mind for investors, providers, and regulators alike.

We have excluded U.S.-domiciled ETFs that make use of derivatives from our study. A clear definition of a synthetic ETF within the context of the U.S. market is more elusive than it is in those regions we examined. Also, what we would deem “synthetic” ETFs represent a very small portion of total ETF assets in the U.S., are required to be fully collateralised, and offer a far narrower range of exposures (they are largely leveraged and inverse products) relative to those synthetic ETFs in the markets that we studied. Furthermore, the U.S. Securities and Exchange Commission announced in March 2010 that it was no longer considering exemptive relief requests for ETFs that planned to make substantial use of derivatives, an edict that remains in place as of this writing.

The key objectives of our research are as follows:

- ▶ To highlight the progress that the industry has made towards increased investor protection and greater transparency since our last report on the matter, issued in July 2011
- ▶ To call out those areas where there remains room for improvement

- ▶ To reiterate what we believe to be industry best practices
- ▶ To provide useful profiles detailing the practices employed by each provider with the aim of equipping investors with the information they need to assess these funds’ structural risks

In addition to these key objectives, we have also provided analysis and data on asset flows within the European marketplace, a treatment of basic swap mechanics and the two most common swap structures employed by providers of synthetic ETFs, and a brief history of synthetic ETFs and an introduction to the regulatory landscape in other geographies. In sum, it is our hope that the work we present here will serve to further key stakeholders’ understanding of synthetic ETFs.

Since 2011, synthetic exchange-traded funds (ETFs) have been at the epicenter of a round of high profile warnings on the risks associated with ETFs from the likes of the International Monetary Fund (IMF), Financial Stability Board (FSB), and Bank for International Settlements (BIS), amongst others. Synthetic funds’ added layer of complexity vis-à-vis traditional physical replication funds has led to a good deal of confusion amongst those investors unfamiliar with the mechanics of derivatives—which ultimately provide investors with the return of the reference index within synthetic ETFs. These structures contain some unique sources of risk. In assessing the risks associated with these structures it is important to address three key questions:

- ① What is the source of the risk?
- ② How are investors being protected against this risk?
- ③ How are investors being compensated for assuming this risk?

The chief source of risk (aside from investment risk) that investors face in synthetic ETFs is counterparty risk. Fund investors are relying on one or multiple counterparties to provide them with the performance of the fund’s reference index. Should a counterparty default, fund shareholders face the risk of permanent capital impairment.

Each of these funds has built-in protections against counterparty default. First and foremost, a large majority of synthetic ETFs worldwide are subject to regulation that limits the amount of counterparty exposure they can have to any single issuer via a derivative. In practice, as you will see in the provider profiles, most providers hold assets or collateral in amounts that are either near, equal to, or greater than their fund's net asset values. Some providers engage multiple counterparties in order to diversify their funds' exposure. These are just a handful of the most important safeguards that have been put in place to protect investors in synthetic ETFs from counterparty risk.

Lastly, it is important that investors are compensated for assuming this additional form of risk. In general, synthetic ETFs have shown that they offer some compensation in the form of lower total holding costs. Holding costs represent a combination of the ETF's total expense ratio (TER) and tracking performance against their benchmark. Generally speaking, synthetic ETFs have proven to have lower TERs (with some Asian ETFs being notable exceptions) and superior tracking relative to physical products—especially in those instances where the underlying asset class is smaller and/or less liquid (e.g. emerging market equities).

Ultimately, it's up to investors to assess for themselves the appropriate balance between protection and return. Only they can decide their level of comfort with the risk inherent in these structures and the benefits associated with assuming this risk. And for that they need to do proper due-diligence. While the research burden lies with the investor, ETF providers can lighten it by being fully transparent about their practices and the various risks associated with them. While so far the industry has done a fairly good job at self-regulating, we believe that more can be done. There remains a real need for common industry standards as it pertains to labeling synthetic ETFs, disclosing information about the funds' asset/collateral baskets, counterparties, and embedded costs. In certain instances, perhaps most notably in Hong Kong, regulators have taken the lead in driving this process. Elsewhere, most notably in Europe, it remains to be seen whether a push towards harmonisation of best practices ultimately comes from within the industry itself or is handed down from regulators.

Introduction to Swaps

In finance, a swap is an agreement between two parties whereby they promise to exchange with each other the return from a particular asset, in lieu of actually transferring ownership. They are often non-standardised arrangements, tailored to the specific needs of the parties involved. The terms of the swap, such as what is actually being exchanged, and for what time period, are set out in a contract usually based on a template that has been created by the International Swaps and Derivatives Association (ISDA).

There are a number of different types of swap. The most common is the interest rate swap, where one counterparty agrees to pay to the other party a fixed rate of interest on a notional sum, and the other party pays a floating rate of interest on the same sum. Other types involve exchanging currency payments. Credit default swaps, which gained notoriety during the financial crisis, dictate that one party must pay to the other party an amount equal to the loss on a bond in the event that its issuer defaults, in exchange for periodic payments from the buyer of this “insurance”. And total return swaps are agreements in which one party agrees to pay the total return of a financial asset to the other party over the life of the deal. In many cases, the two parties need only pay the net amount owed between them in each period.

The reasons for entering a swap transaction are numerous. A company may be able to borrow cheaply in its own market,

but seeks to pay coupons in a different currency. In another case, a party might seek the economic exposure to a particular set of stocks, but be unable or unwilling to actually buy those stocks in the open market, because of balance sheet concerns or regulatory impediments.

Swaps have become a popular tool in exchange traded funds, in part for use in those cases where access to the underlying is difficult, but for other reasons as well. ETF providers often find they can achieve returns that more closely match an underlying index, for a lower cost, by delegating the responsibility to a swap counterparty that is in a better position to achieve the results. In situations where the ETF provider is an affiliate of a global financial institution that can act as counterparty to the swap, the provider may find it particularly attractive to arrange things this way.

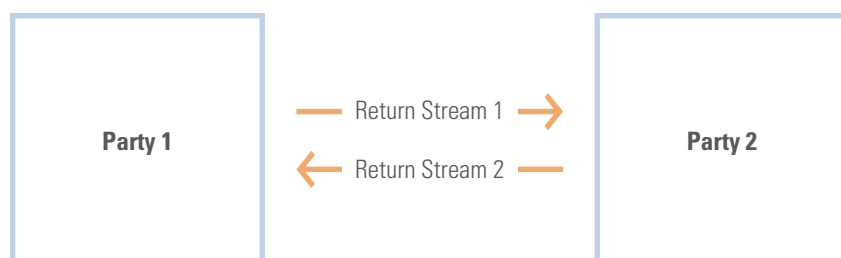
According to the Bank of International Settlements (BIS), which publishes statistics on derivatives markets, in June 2011 the notional value of outstanding swap contracts was in the region of USD 500 trillion. By comparison, the global asset value of synthetic ETFs is roughly USD 185 billion, representing a mere drop in the bucket of the global derivatives market.

There are two broad ways that ETFs use swaps to get their exposure to the benchmark: the un-funded model and the funded model. The specifics of each model will be covered in the next section.

The key risk in any swap transaction, apart from the economic risk of the underlying exposure, is counterparty risk. Swaps involve a promise to pay what is owed, and there is always the chance that the party on the other side of the deal will default on that pledge. It is no small risk, as we were reminded during the financial crisis. According to a McKinsey report, global defaults on debt were USD 430 billion in 2008, up from just USD 8 billion in 2007¹. This risk can never be eliminated from swap transactions, but there are ways it can be mitigated.

1. Getting to Grips with Counterparty Risk. McKinsey & Company, 2010.

Simplified Swap Structure



The Un-Funded Swap Model

The un-funded swap model² was the first method to be used in Europe to synthetically track the performance of an index. This is a model also employed by some Asian and Australian providers. For purposes of this piece we shall focus on how this model is implemented in Europe within the UCITS³ framework. Under this structure, the ETF uses cash from investors to buy a basket of securities from a swap counterparty (often the provider's parent bank) who commits to deliver the performance of a reference index (less swap fees where applicable) in exchange for the performance of the securities bought by the fund.

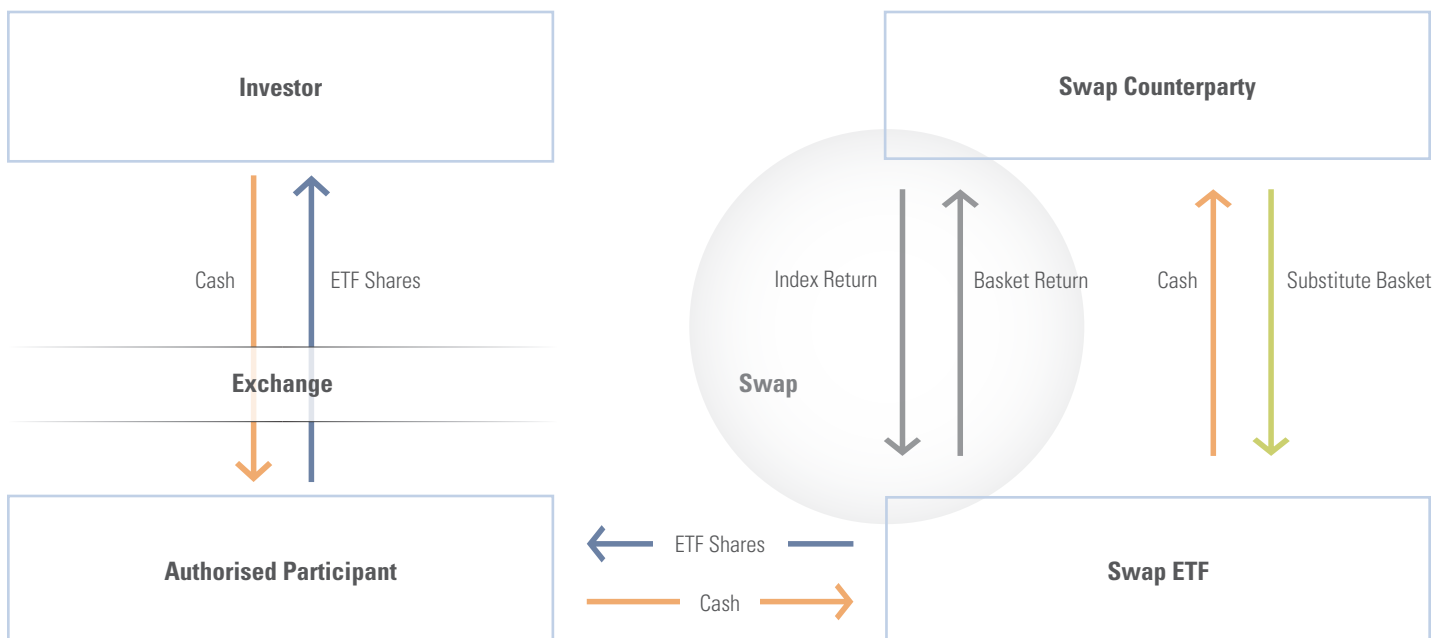
The assets bought by the fund, which are often referred to as 'fund holdings' or 'substitute basket', typically do not include the constituents of the reference index but can have high degree of correlation with them. However, the substitute basket must comply with UCITS regula-

tions⁴ on asset type and liquidity and often also complies with UCITS on diversification, although at the moment it is not obliged to. It usually consists of equities and bonds that the investment bank acting as the swap counterparty may have within its inventory. The securities are held in a segregated account at a custodian, where they are regularly monitored and verified.

It is important to note that at all times the fund remains the owner of these assets and enjoys direct access to them. This means that if the swap counterparty defaults, in theory, the ETF provider should be able to liquidate the assets swiftly should this option be chosen and in accordance with the relevant home domicile law.

Counterparty risk, also generally known as default risk, refers to the possibility that the party providing the swap will fail to fulfill its obligation to deliver the performance of the assets being tracked. Net counterparty exposure is measured as the difference between the net asset value ("NAV") of the ETF and the value of the substitute basket (in other words, the swap mark-to-market).

Simplified Un-funded Swap ETF Structure



Example of Daily Counterparty Exposure of an ETF using the Un-Funded Swap Model

	Day 1 ¹	Day 2	Day 3	Day 4 Before Resetting	Day 4 After Resetting	Day 5 Before Resetting	Day 5 After Resetting
Index	100	105	110	115	115	109	109
Substitute Basket	100	100	108	103	115	112	109
Swap Value ²	0	5	2	12	0	-3	0
ETF NAV ³	100	105	110	115	115	109	109
Net counterparty exposure ⁴ %	0 / 100 = 0	5 / 105 = 4.76	2 / 110 = 1.82	12 / 115 = 10.43	0 / 115 = 0	-3 / 109 = -2.75	0 / 109 = 0
Description	Initial investment of 100, starting level of the index 100, swap value is 0	The index rises whereas the basket remains flat: swap value is 5	Both the index and the basket rise: swap value is 2	Under UCITS, counterparty exposure is limited to a maximum of 10% ⁵ , so the swap is reset. Resetting to zero involves a payment of 12 from the swap counterparty to the ETF (reinvestment in the substitute basket)		The swap value becomes negative, so the swap is reset ⁶ . Resetting involves a payment of 3 from the ETF to the counterparty (securities from the substitute basket are sold)	

1. For simplicity purposes, in this example, swaps are reset intra-day. In reality, they may be reset the following day when fund valuations are known; 2. Swap Value = Index Value – Substitute Basket Value; 3. ETF NAV = Substitute Basket Value + Swap Value; 4. Net Counterparty Exposure = Swap Value / ETF NAV; 5. Most providers apply stricter reset triggers than the 10% UCITS limit; 6. Not all ETF providers reset swaps based on the fund owing the swap counterparty money

To mitigate counterparty risk, UCITS regulations stipulate that exposure to a swap counterparty may not exceed 10%⁵ of the fund’s NAV. In other words, the daily NAV of the substitute basket should amount to at least 90% of the ETF’s NAV. This means that, if the swap counterparty defaults, the fund holders should be able to recoup at least 90% of the ETF’s NAV prevailing at the time of default.

The swap is marked-to-market at the end of each day and is reset whenever the counterparty exposure approaches the 10% UCITS limit (or a lower limit set at the discretion of the ETF provider). In the case of a swap reset⁶, the fund will ask the counterparty to pay the swap mark-to-market by delivering additional securities to top up the substitute basket.

Some providers may engage multiple swap counterparties in an effort to minimise exposure to any one of them.

In practice, swap reset policies vary greatly across providers and across funds. Some issuers may reset swaps more frequently than others depending on the arrangements they have in place with their respective swap counterparties. Today, the majority of ETF providers who use the un-funded swap model apply stricter reset triggers than the UCITS rule of 10%, which results in more

frequent resets and generally lower counterparty risk. Some ETFs may even see their swaps reset to zero on a daily basis as a result of daily creation/redemption activity or a daily target of zero counterparty exposure. Some funds may not reset their swaps when their marked-to-market value becomes negative, i.e. based on the fund owing the swap counterparty money. Other providers, instead of immediately resetting the swap, may choose to over collateralise a positive swap exposure. The last two cases result in negative counterparty exposure.

2. Un-funded swap structures involve the use of total return swaps. A total return swap is a bilateral financial transaction where the counterparties swap the total return of a single asset or basket of assets for periodic cash flows, typically a floating rate such as Libor.

3. UCITS (Undertakings for Collective Investment in Transferable Securities) is a set of European Union Directives that aim to allow investment schemes to operate freely throughout the EU on the basis of a single authorisation from one member state. All UCITS ETFs are subject to the same requirements and constraints.

4. In addition to UCITS, fund holdings must also comply with applicable home domicile law.

5. Swap counterparties which are not credit institutions will see their UCITS limits reduced to 5%.

6. Swaps may be reset when the limit set by the provider is exceeded intra-day or on the

The Funded Swap Model

The funded swap model was introduced in Europe in early 2009. Under this structure, the ETF doesn't use investors' cash to build a substitute basket—as is the case in those ETFs using un-funded swaps. Instead, the fund transfers investors' cash to a swap counterparty in exchange for the index performance (less swap fees) plus the principal at a future date. The counterparty posts collateral assets in a segregated account with a third party custodian. The account can be held either in the name of the fund (in the case of a transfer of title⁷) or in the name of the counterparty and pledged in favour of the fund (in the case of a pledge arrangement).

The posted collateral basket is usually composed of securities which come from the swap counterparty's inventory (typically equities included in well-recognised indices, bonds, cash and funds) and meets certain conditions in terms of asset type, liquidity and diversification in accor-

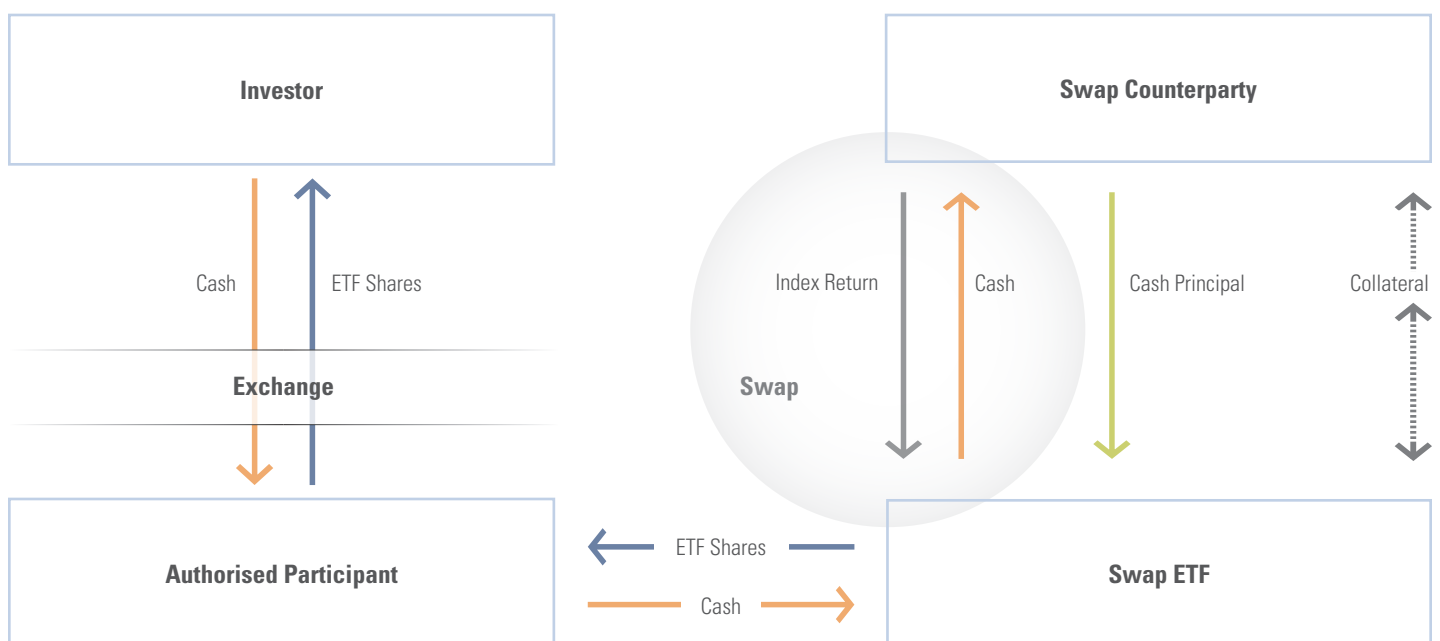
dance with CESR Guidelines⁸. It must be appropriately safeguarded and available to the fund at any time.

Regulations also require that appropriate haircuts (or margins) be applied to the assets posted as collateral to account for the risk of value fluctuations and the fact that the fund doesn't hold the assets. The level of haircuts (or margins) applied depends on the type of securities delivered⁹ and the relevant home domicile law¹⁰, which may be stricter than the provisions of European rules pertaining to collateral.

As a direct result of these rules, funds relying on the funded swap approach are normally over-collateralised, i.e. the market value of the collateral posted by the swap counterparty exceeds the net asset value ("NAV") of the ETF. Collateral is monitored and marked-to-market on a daily basis by the collateral manager¹¹.

Counterparty risk, also generally known as default risk, refers to the possibility that the party providing the swap will fail to fulfil its obligation to deliver the performance of the assets being tracked. Net counterparty exposure is

Simplified Funded Swap ETF Structure



measured as the difference between the fund's net asset value and collateral value (less haircuts or margins). Under UCITS, the net counterparty risk exposure may not exceed 10% of the fund's NAV, which means that at least 90% of the ETF must be collateralised. Best practice is that the fund is fully collateralised, i.e. that collateral value (less haircuts or margins) is equivalent to 100% of the fund's NAV. In all cases, whenever the collateral value falls below the level of collateralisation agreed with the swap counterparty, additional collateral will be requested. This is to ensure that the agreed-upon level of collateralisation is maintained at the end of each business day.

With a transfer of title, the collateral is treated as the property of the fund. This means that if the swap counterparty defaults, in theory, the ETF provider should be able to gain access to the assets without prior approval and dispose of them. Under a pledge structure, the fund would have to claim ownership of the collateral assets before it can sell them.

As in the un-funded swap model, providers using funded swaps may engage multiple swap counterparties in an effort to minimise exposure to any one of them.

Assume an ETF invests 100 into a funded swap and under that agreement pays 100 to the swap counterparty in ex-

change for the performance of the target index. The swap counterparty will need to post collateral (plus haircuts or margins) in order to collateralise the credit exposure under the swap.

In the example illustrated below, we will assume that the funded swap is the ETF's only investment and that the swap mark-to-market therefore corresponds to the ETF's NAV. We will also assume that the swap counterparty will collateralise 100% of the fund's NAV using equities and apply a 20% haircut to their valuation.

7. Collateral is posted under an English law CSA (Credit Support Annex) involving transfer of title.

8. Guidelines issued in 2010 on collateral for derivatives by the Committee of European Securities Regulators (CESR), which became the European Securities and Markets Authority (ESMA) in 2011.

9. Haircuts can vary between 0% and 30% depending on liquidity, volatility, correlation with index and creditworthiness of the securities delivered as collateral. Riskier asset types like equities will typically require larger haircuts than bonds and cash.

10. As of today, there is no harmonised pan-European policy on haircuts and margins to be applied on collateral, as they seem to differ in practice across providers and jurisdictions. In Luxembourg for instance, the CSSF considers on an indicative basis that "an adjustment of approximately 20% is appropriate for shares which are comprised in a main index". In Ireland, the Central Bank stipulates that "where the collateral issuer is not rated A-1 or equivalent, conservative haircuts must be applied." Appropriate haircuts are therefore left at the discretion of the fund provider's board of directors and custodian.

11. The collateral manager can be a third party, the custodian or affiliated to the bank providing the swap

Example of Daily Counterparty Exposure of an ETF using the Funded Swap Model

	Day 1 ¹	Day 2 Before Adjustment	Day 2 After Adjustment	Day 3 Before Adjustment	Day 3 After Adjustment
Index	100	105	105	105	105
Fund NAV	100	105	105	105	105
Collateral Value ²	125	125	131.25	118.125	131.25
Collateralisation %	125	119	125	112.5	125
Net counterparty exposure ³ %	0		0		0
Description	Initial investment of 100, starting level of the index 100, the counterparty delivers collateral of 125	The index rises by 5% but the collateral value remains flat. To maintain the 20% haircut, additional collateral of 6.25 (5 × 1.25) is requested		The index remains flat but the collateral value falls by 10%. To maintain the 20% haircut, additional collateral of 13.125 is requested	

1. For simplicity in this example, we assume that collateral transactions are executed intra-day. In reality, they may be executed the following day when fund valuations are known; 2. Collateral Value = Swap exposure being collateralised / (1 - haircut). In this example, collateral value = 100 / (1 - 20%); if a margin instead of a haircut was used, then collateral value would be 120, i.e. 100 x (1 + 20%); 3. Net Counterparty exposure = ETF NAV - Collateral Value (less haircuts or margins);

Synthetic ETFs in Europe: Additional Progress, Changing Techniques, and Lingering Issues

Additional Progress

This section of the report focuses on the changes that have been implemented by synthetic ETF providers in Europe since our first report was issued last year. We examine how practices have developed with regards to counterparty risk management in a context of intense regulatory scrutiny and self-interested debates. Key developments include advances in the level of investor protection within swap-based funds, enhanced transparency, and changes to replication strategies amongst some providers, including the emergence of new swap arrangements.

Increased investor protection

Perhaps the most significant development we have seen over the last twelve months is the evolution of practices with respect to counterparty risk mitigation, and primarily as it pertains to the quantity of assets that are owned or held for the benefit of the ETF in the event of a counterparty default.

We highlighted in our July 2011 report that the level of collateralisation could vary greatly across providers and their individual ETFs depending on the swap model employed and the margin of safety offered on top of, or in accordance with the relevant regulatory requirements. Specifically, our research showed that those providers using a funded swap model would typically fully- or over-collateralise their funds (often by virtue of regulatory mandate) while those relying on un-funded swap arrangements would typically allow counterparty exposure to reach a level ranging from 5% to 10% of the fund's NAV (in line with the UCITS prescribed limit of 10%), resulting in many cases in regular periods of "under-collateralisation".

In the interim, some providers using an un-funded swap model have moved towards full-collateralisation. With a daily target of zero counterparty risk, Lyxor and Amundi ETFs now hold a substitute basket that represents at least 100% of the fund's NAV at the end of each business day. This compares to a prior threshold of 90% when the firms allowed counterparty exposure to rise up to 10%. Swaps may also have a negative value, which would be in essence identical to over-collateralisation of the fund.

In making these changes, Lyxor and Amundi follow in the footsteps of Credit Suisse, ComStage and ETFlab in their goal towards zero counterparty risk at the end of each day. In our view, this is a positive development as it improves the overall level of investor protection. It may also spur other providers to adopt additional measures in order to further reduce counterparty risk. Adhering to the 10% UCITS limit or lowering this threshold by only a few percentage points doesn't seem to suffice anymore. Today, the majority of synthetic issuers are giving further comfort to investors by immunising counterparty risk exposure through full- or over-collateralisation.

Enhanced transparency

We have also seen major improvements in the area of transparency in the synthetic ETFs space over the last twelve months. Heavy regulatory scrutiny, coupled with unfavourable media coverage, has forced providers to ramp up disclosure with regards to collateral and counterparty risk management. While a few providers were already fully transparent before the issue came onto the radar of international regulators, many increased their level of transparency in response to the pressure.

As a result, all synthetic issuers (bar one) now publish the composition of substitute/collateral baskets on their websites. Whether these measures have been taken as a form of self-defence or represent a demonstration of goodwill, the end result of increased transparency ultimately benefits all stakeholders. It is also worth noting that similar measures have not been taken by virtually all those providers of physical replication ETFs that engage in securities lending¹². We continue to believe that collateral disclosure is crucial to help build (and in some cases, regain) inves-

tors' trust, and allow for greater scrutiny of the assets backing the swaps. This, in turn, will ensure that these assets consistently remain of the highest quality.

Changing Techniques

We have also seen changes to the replication strategy used within a few ETF line-ups, which we believe reflects the growing uneasiness of investors and certain providers in the face of the virulent "synthetic versus physical" debate.

Credit Suisse is the prime example of this phenomenon, as it has converted 11 of its 16 swap-based ETFs to physical replication funds. Australian provider BetaShares also changed the replication method of two of its swap-based ETFs to physical replication in the face of increased client, regulatory, and media scrutiny.

Meanwhile Ossiam, a new French provider focusing on specialty exposures which has typically used synthetic rep-

lication, introduced a fund tracking a minimum variance version of the FTSE 100 using physical replication, which does not engage in securities lending. The decision to employ this technique rather than synthetic replication was made under the belief that it is more suitable for the UK market.

Finally, the past twelve months have been marked by the emergence of new, and more complex, swap arrangements to replicate an index.

Notably, UBS has recently started to move away from the fully-funded model and towards utilising a combination that targets an 80/20 mix of un-funded and funded swaps, respectively. With this combined model, UBS aims to improve fund returns by reducing costs. It also aims to provide investors with a greater sense of security knowing that their ETF has outright ownership of a large part of the assets backing the swap through the un-funded swap arrangement. This structural change, which is expected to be implemented across the entire UBS synthetic ETF offering by the end of the year, comes at an opportune time as the Swiss regulator has recently voiced concerns over the funded swap approach.

SpotR, the ETF brand of Sweden's SEB Investment Management, opted for a similar dual-swap structure when it launched its leveraged and inverse ETFs last year. The company considered this replication methodology the most efficient way to achieve the investment objective.

Lingering Issues

Despite having made progress in recent months, there are a number of lingering issues that we feel the industry needs to address, issues which we first highlighted in spelling out our suggested best practices in our original report.

Recommended best practices: Transparency

While we previously acknowledged that progress has been made on the transparency front since we issued our first report last year, we think there is still room for improvement as it pertains to the frequency and quality of online disclosure of the composition of collateral and substitute baskets, which can still vary quite widely across providers.

Swap-Based ETF Providers Moving Towards Best Practice In Europe

ETF Provider	*Transparency: Regular Public Disclosure		Investor Protection: Full-Collateralisation Policy	
	July 2011	Now	July 2011	Now
Amundi		•		•
ComStage		•	•	•
Credit Suisse	•	•	•	•
db X-trackers	Funded	•	•	•
	Unfunded	•	•	
EasyETF	Equity ETFs			•
	Others			•
ETFflab	N/A	•	N/A	•
ETF Securities	•	•		
iShares	•	•	•	•
Lyxor		•		•
Ossiam	N/A	•	N/A	
PowerShares	N/A	•	N/A	
RBS Market Access		•		
Source	•	•		
SpotR	N/A	•	N/A	•
UBS		•	•	•
XACT ETF	•	•	•	•

* Daily or weekly disclosure on the issuer's website

Who is your counterparty?

Following the flurry of reports from regulators expressing concerns about the lack of transparency around the matter of counterparty risk, we would expect providers to give full disclosure of the identity of swap counterparties as well as the amount of counterparty exposure on a fund by fund basis. However, this is not always the case.

The lack of transparency around who provides the swaps for each fund is perhaps most evident in the multiple counterparty model. While we believe that engaging several swap providers can add value by virtue of diversifying counterparty risk, it certainly does not exempt those opting for this model from disclosing the identity of the banks involved in each fund. With the multiple counterparty model, investors often don't know the exact distribution of the fund's exposure to the various counterparties, or even how many counterparties are actually involved. In light of these varying practices and for the sake of consistency, we believe that the name of the counterparties and the amount of exposure¹³ to each of them should be disclosed daily on a fund by fund basis on the issuer's website.

Additionally, we think that publishing the credit quality of each swap provider could help improve counterparty risk analysis. In our view, this is especially important in light of lingering concerns over the sovereign debt and banking crisis in Europe which has triggered a wave of downgrades in credit ratings of major financial institutions.

What are their methods?

Also, as an increasing number of investors are becoming familiar with the two main synthetic replication methodologies, namely the funded and the un-funded swap structures, we would expect issuers to be more forthcoming about the one they use for their ETFs and to clearly indicate it in their marketing material. Currently, in the absence of a harmonious naming convention, we continue to see terminology which we find confusing and which probably serves marketing purposes more than it helps investors discern the products and the risks associated with them.

How often are they providing disclosure?

With regards to frequency of disclosure, a majority of synthetic ETF sponsors now provide the details of fund holdings/collateral on their websites on a daily basis, while a handful of them do it on a weekly basis or with a few days' delay. Because the assets backing the swap may change significantly on a daily basis (as swap counterparties recycle their inventories) we think that collateral details should be made publicly available and updated every day too. Daily updates are particularly relevant in times of high market volatility, like those experienced after the Lehman bankruptcy in 2008 or the earthquake in Japan in 2011. We continue to believe that all investors—whether institutional or retail—should be able to monitor the evolution of the assets backing the swap at any time, since after all, these assets are what they would actually own in the case of a counterparty default.

Can you make sense of the collateral/substitute basket?

Best practice would also be not to limit online daily disclosure to a simple list of collateral securities, counterparty names and level of counterparty exposure. Additional information such as the type of securities constituting the collateral/substitute basket along with the haircuts applied to each of these securities (in the case of funded swap structures) should be clearly indicated to help investors make sense of the collateral and/or assets. Because there is no harmonised pan-European policy on haircuts, practices vary significantly from one provider to another (often depending on where the fund is domiciled), with some providers being more conservative than others. Haircuts can vary between 0% and 30% depending on the type, liquidity, volatility, correlation and creditworthiness of the securities delivered as collateral. These differences result in levels of collateralisation ranging from 100% to over 125%, leaving investors wondering if a high level of collateralisation is always better than a low one.

Presenting aggregate data by security type, country, sector and currency (and for bonds, credit rating), would also facilitate investors' due diligence.

We often hear the argument that more transparency is good but the problem in many cases is that investors are not able to make sense of the information provided. Evaluating the quality of the assets used as collateral is indeed no easy task; nor is figuring out whether one type is better than another, which ultimately depends on the market environment. What was considered to be robust collateral before the Lehman debacle and the European sovereign debt crisis is not necessarily seen as equally robust anymore. In some instances, investors would be better off with equity collateral, while in other instances they would be better off with government bond collateral or cash. In our view, collateral should consist of highly liquid blue chip equities and/or investment grade bonds and/or cash.

The issue of the eligibility of assets used as collateral has been addressed by ESMA in its most recent guidelines on ETFs and other UCITS. We believe that a list of qualitative criteria (as set out in CESR's guidelines on risk measurement) should be complemented by an indicative list of eligible assets in order to provide investors with concrete examples of securities possessing the relevant qualitative attributes. This would allow for a better assessment of the baskets backing the funds.

Swap costs... what swap costs?

Providers of swap-based ETFs have generally not been forthcoming with details on the swap costs embedded within their products, and this remains an area needing improvement. While a few providers appreciate the usefulness of disclosing swap costs (as these are typically not included in a fund's annual total expense ratio), a majority don't deem it necessary. As a result of this lack of transparency, investors are left in the dark as to the extent to which their ETF will underperform the index (the amount attributable to the swap spread in this case), and cannot easily make comparisons of products tracking identical or similar indices.

Swap fees can vary quite widely across issuers and across funds. Some claim they charge no spread at all—those that rely on their parent bank to write the swaps can easily do so. While others—typically those who use

third party swap providers—charge a spread, which will have an impact on the tracking difference of the fund. This swap spread depends on various factors: the costs borne by the swap provider in hedging its exposure, any revenue generated (from securities lending and tax optimisation), and the cost of collateral. It is worth noting that depending on the underlying index, the swap provider may decide to pass on part of its revenues to the fund. In this case, the swap spread will be negative, i.e. a gain for the fund rather than a cost.

...and a few more

In addition to some of the lingering issues that we first addressed in our July 2011 report, there are a few issues that have become more prominent in the interim that we did not treat in detail. Here, we discuss a few of these concerns surrounding synthetic ETFs.

Correlation between collateral and the underlying index: does it matter?

A concern that we often hear from investors and a question that was recently posed by ESMA in its latest consultation paper on the matter is whether there should be a high degree of correlation between a synthetic ETF's collateral/substitute basket and its underlying benchmark. Our survey shows that few issuers strive to achieve a high degree of correlation between the collateral provided and the fund's underlying benchmark. More often, they prioritise the liquidity of the collateral.

In our view, both practices have benefits. On the one hand, a high degree of correlation would increase the likelihood that the collateral value would move in tandem with the underlying benchmark. This could result in operating efficiencies which would serve to keep ongoing operating costs low. On the other hand, having uncorrelated collateral could serve to ensure maximum liquidation value for ETF shareholders in the event a counterparty defaulted and the fund was ultimately dissolved. However, this type of collateral is typically more expensive and these expenses would ultimately be borne by investors. All told, we would prioritise appropriate haircuts, liquidity, and diversification of collateral rather than the collateral's level of correlation with the underlying portfolio.

Structural risks

The issue of potential structural risks posed by synthetic ETFs came into focus last year after a number of international economic bodies, including the Bank of International Settlements and Swiss regulator FINMA, raised specific warnings over the funded swap model. Regulators' concerns are related to the fact that, unlike in the un-funded swap structure, ETFs relying on funded swaps don't directly own the collateral assets. This, the regulators warn, can potentially lead to delays in liquidating these assets if the swap counterparty were to default.

While this is a valid point in theory, it's worth noting that all ETFs using funded swaps have legal arrangements in place, namely a transfer of title or a pledge, which aim to limit any potential delay in accessing the collateral. With a transfer of title, the collateral is treated in a default scenario as the property of the fund. This means that the collateral will be immediately made available to the fund, without prior approval from any entity.

The pledge structure is currently only employed by db X-trackers. The issuer has an arrangement with its custodian and collateral manager under Luxembourg law that entitles db X-trackers ETFs to appropriate collateral assets and liquidate them without prior notice to the counterparty or any other third parties. This degree of enforceability should serve to lessen some investors' concerns over db X-trackers' specific pledge structure.

Securities lending

Securities lending is not the exclusive domain of physical replication ETFs. Providers of swap-based ETFs may lend out the securities contained within the substitute basket or the fund's collateral in order to generate additional revenue for the fund. While helping to partially offset management fees and other sources of tracking error, this practice does potentially introduce an additional layer of counterparty risk to the synthetic structure. There is always a chance in the event of a swap counterparty default that the borrowers will be unable to return the securities backing the swap. To mitigate this risk, the bor-

rowers are requested to post collateral greater than the loan value.

However, such activity is not widespread across swap-based ETFs because the securities that usually make up substitute baskets and collateral don't command high lending fees¹⁴, hence the reason the banks acting as swap counterparties are happy to push these securities out of their inventories in the first place.

In fact, our survey reveals that only one synthetic ETF provider, namely ComStage, currently engages in securities lending at the fund level. The German issuer allows up to 100% of its ETF holdings to be lent to parent bank Commerzbank in exchange for a fee, all of which is passed back to the fund. Commerzbank, in turn, may loan the assets to third party borrowers. To mitigate counterparty risk at each level of the borrowing chain, both Commerzbank and third party borrowers post collateral.

Instead of being carried out at the level of the fund by the ETF provider, securities lending may be undertaken outside the fund by the swap counterparty. The bank providing the swap may lend the securities of its hedging baskets, i.e. those that the bank bought to hedge the exposure it has committed to deliver to the fund. Hedging baskets typically consist of securities included in the index that the ETF is tracking or/and futures contracts giving exposure to the underlying market. The choice of instruments used by the bank to hedge its risk and the extent to which it lends these out largely depend on the risk strategy of the swap desk. The revenues derived from this practice can help the bank cover the costs relating to the swap and can also help reduce expenses charged to the ETF holders.

While these securities lending activities have raised regulatory concerns¹⁵, they shouldn't be a cause for concern amongst ETF investors. These activities are typically conducted at the bank level and the counterparty risk associated with them is directly assumed by the bank. In this process, the ETF is one step removed from the risk of a borrower default. As a result, we don't think it is appro-

priate for ETF holders to expect any direct compensation for the risk that the bank, not the fund, is taking.

That said, as for physical ETFs, we would welcome transparency on these practices through the disclosure of swap costs as sec lending is normally one element of the swap spreads that are charged to the ETF.

12. It should be noted that in some cases these may be the same providers of synthetic ETFs. As of today, only iShares provides full details of collateral posted in exchange for securities loans.

13. We recognise that there are currently legal and practical constraints that may prevent full disclosure of counterparty exposure but these should be overcome.

14. Typically, investment banks hold large inventories of securities from their normal trading activities. Banks divide this inventory into securities where lending fees are high and securities where lending fees are low. Banks directly lend securities where lending fees are high. Banks can use the remaining inventory to provide collateral to the ETF under the swap arrangements. See an overview of the objectives and work of the EBA's Standing Committee on Financial Innovation (SCFI) in 2011-2012 London, 01.

15. Synthetic ETFs are no different from other arrangements to generate funding for banks via securities lending activity. ETFs are used to lower the bank's overall funding cost either by directly reducing the cost of holding inventory or allowing the bank to hold more risk on their balance sheet. Synthetic ETFs have two different impacts on banks' funding depending on whether the swap desk is able to hedge the swap exposure via transaction with a third party or purchases securities. See an overview of the objectives and work of the EBA's Standing Committee on Financial Innovation (SCFI) in 2011-2012 London, 01.

Synthetic vs. Physical: Examining European Market Flows

The strong growth of the ETF market over the last decade has come hand-in-hand with an increasing level of scrutiny by regulators, international research institutes and media commentators. This growing level of scrutiny reached something of a climax in 2011, with routine accusations of posing a potential source of systemic risk prompting a negative shift in perceptions vis-à-vis the ETF market. One year on from the publication of a batch of reports by the IMF, BIS and G20 FSB that put ETFs firmly in the international spotlight, it is fair to say that the ETF industry was singled out for issues that affect the investment fund industry as a whole. One year on, it is also easy to understand why the ETF industry developed a strong sense of being unfairly treated.

For providers of synthetic ETFs that general sense of unfair treatment was compounded by specific accusations of being the most likely source of systemic risk for investors. After the initial furore and upon a series of consultations, financial regulators are perhaps now taking a much more informed and balanced approach to analysing the crucial issue of structural risk. Still, ETPs do remain at the forefront of discussions, while the "D" (i.e. derivative) word continues to conjure up all sorts of negative images and fears in these times of global economic crisis. Against this backdrop, one of the questions that needs addressing is whether the synthetic-based side of the ETF industry has suffered significant damage in investors' eyes. This is a multi-faceted debate; but for the purposes of this piece we shall focus on what asset flows tell us.

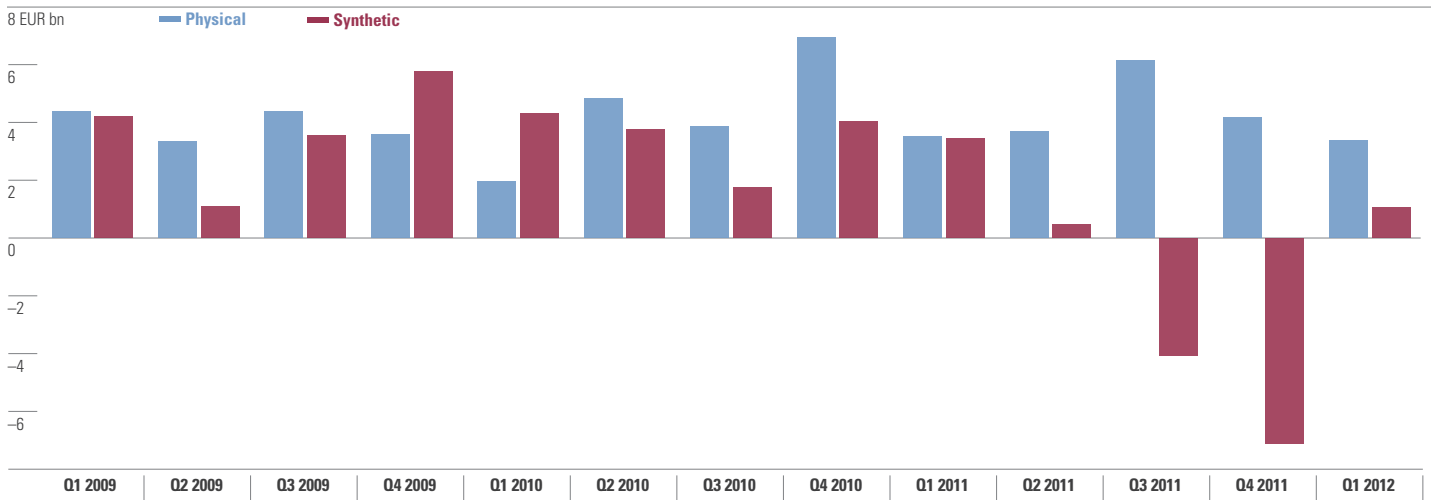
European ETF market flows statistics clearly show that the synthetic side of the industry experienced a fairly rough patch from Q2-11 out to year end, with estimated net outflows of over EUR 4bn and EUR 7bn in Q3-11 and Q4-11 respectively. During the same quarters, physically-replicated ETFs attracted a healthy level of net new money (e.g. over EUR 6bn and EUR 4bn). By the end of

2011, the combination of net outflows and, in some cases, capital losses, caused a loss of market share for European-domiciled synthetic ETFs from an average of 45% of total assets under management in 2009 and 2010 to 38% as of the end of last year.

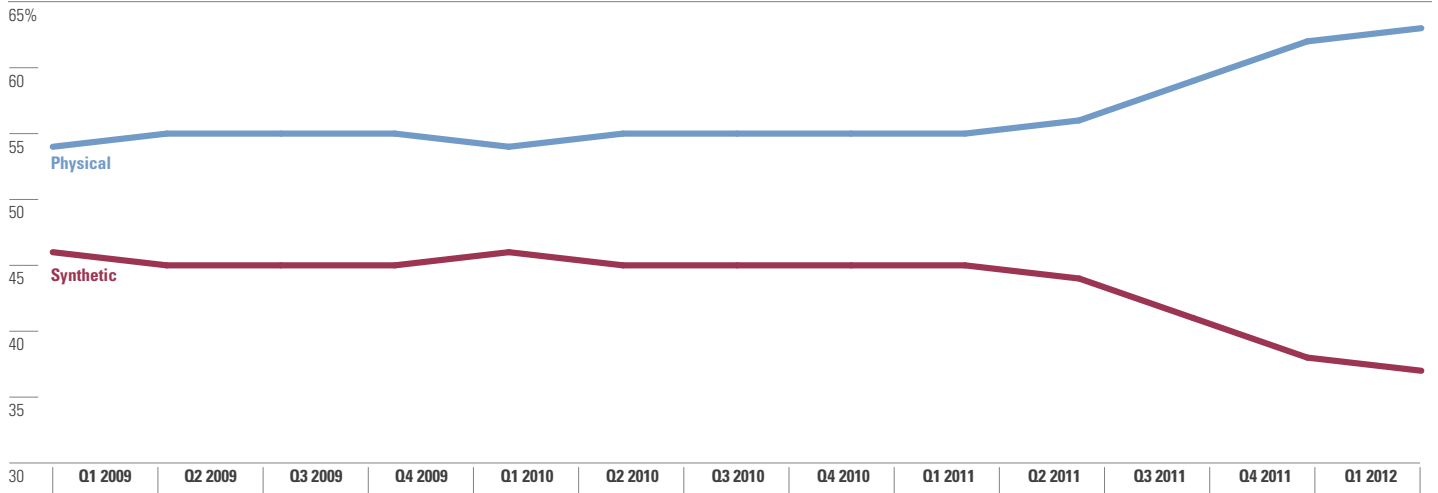
Taken at face value, the data backs up the notion that investors indeed responded to the developing debate about replication methods by migrating out of synthetics into physically-replicated funds. However, in order to gain a complete understanding of market dynamics one must take into consideration all the factors shaping investment flows. In particular, it would be unwise to overlook that financial market flows are primarily a function of general market sentiment and investors' collective response to changing economic fundamentals. A more detailed analysis of market flows during this period reveals that not all synthetic providers suffered the same fate. The physical vs. synthetic debate in 2011 took place against the backdrop of severe tensions in eurozone financial markets on account of the intertwined sovereign and banking debt crisis. Safe-haven-seeking investment flows worked to the benefit of providers with a strong German-centric offering, whether equity or fixed income, irrespective of replication methodology. Conversely, providers drawing most of their business from funds with pan-eurozone exposure, particularly fixed income, were badly hit. This explains why some synthetic ETF providers managed to weather the storm in better shape than others, even posting net inflows over the period. However, once this primary reason shaping market flows is factored in, the statistics continue to signal an underlying concern about the synthetic side of the industry. In short, a majority of investors, acting primarily on fundamentals, went on to favour physically-replicated funds over synthetic to cater their German-centric market exposure needs. As such, it seems perfectly reasonable to infer a degree of causality between the barrage of bad publicity against synthetic ETFs and the resulting market flows, not least given the aforementioned concerns about the financial health of some European banks acting as counterparty for some of the worst-hit providers of synthetic ETFs.

The European ETF market flows story in early 2012 proved one of mild recovery for synthetics, with estimated net inflows of just over EUR 1bn in Q1-12. By this time the physical vs. synthetic debate in Europe had evolved into a more rational discussion about the topic of counterparty risk in all its forms (i.e. affecting both synthetic and physically replicated ETFs). This is likely to have helped, but it must be noted that net flows into synthetic ETFs in Q1-12 still lagged behind the close to EUR 3.4bn channeled into the physical side of the industry. Moreover, overall market share calculations remained broadly unchanged from Q4-11. In that respect, one could argue that, beyond the fundamentals, the way the debate took place in 2011 did considerable damage to synthetic ETF providers insofar as they now have a fair way to make up for the loss of market share.

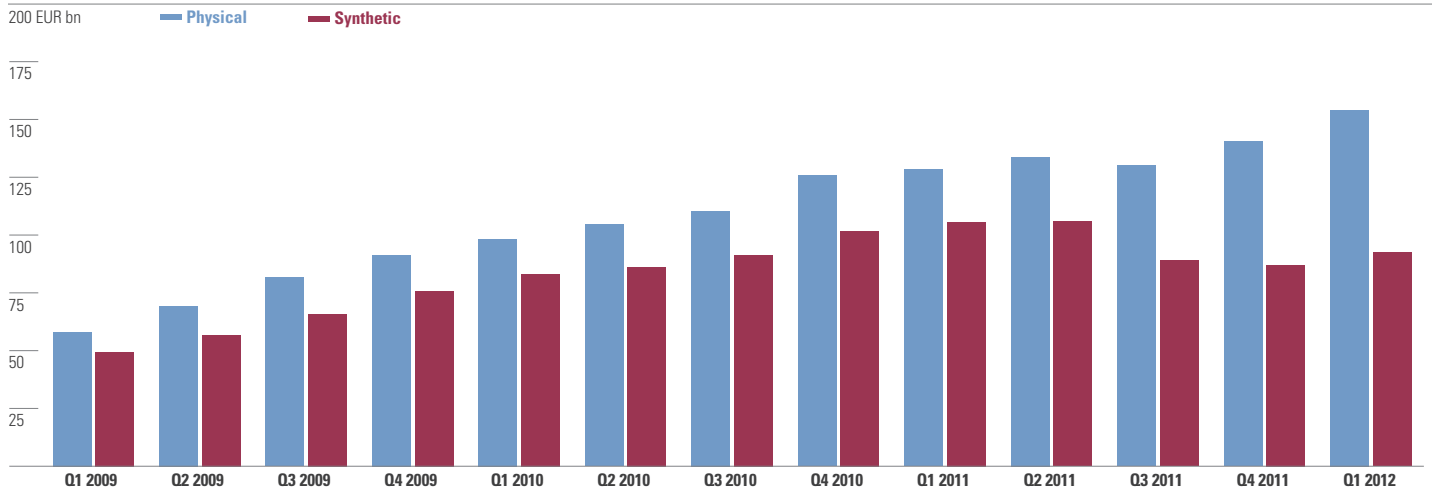
Europe ETF Market: Net Flows by Replication Method



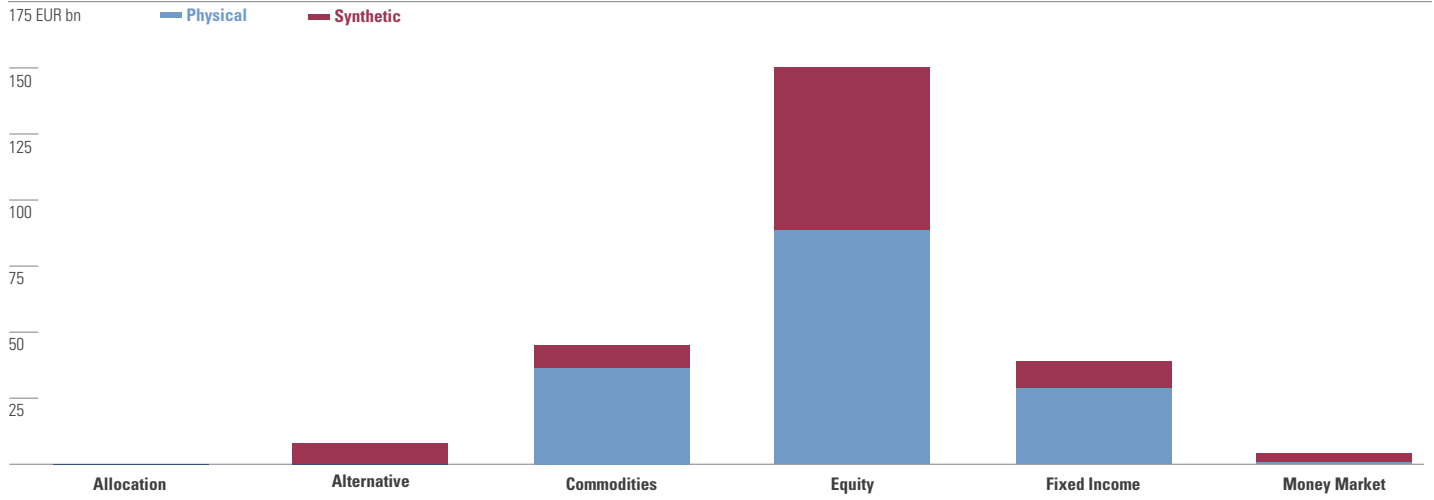
Europe ETF Market Share by Replication Method



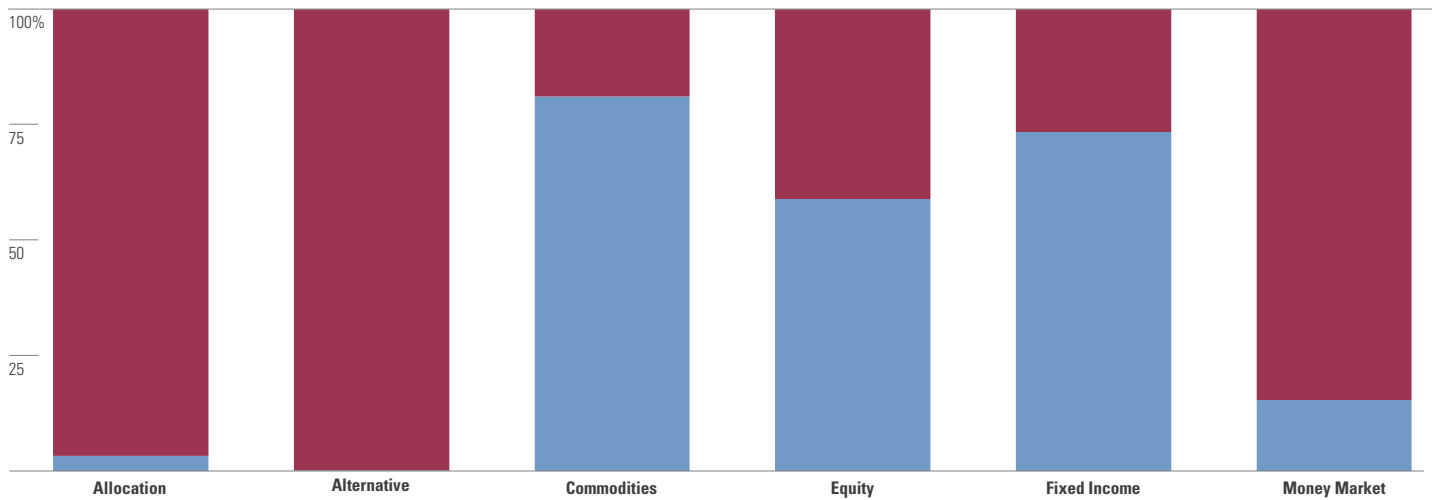
Europe ETF Market Assets Under Management by Replication Method



Assets Under Management by Asset Class / Replication Method



% of Assets Under Management by Asset Class / Replication Method



European Provider Profiles

Please note that the information that we have provided in these profiles was either supplied to us directly by the relevant providers or taken from public sources. As such, we cannot guarantee that it is complete, accurate, or timely. Please refer to ETF prospectuses and providers' Web sites for the latest information. All credit ratings contained within these profiles are valid as of 31 March 2012.

Amundi

Amundi, jointly-owned by Crédit Agricole (75%) and Société Générale (25%), rolled out its first swap-based ETFs in June 2008. The firm currently offers 100 swap-based ETFs out of a total ETF range of 103. Amundi's synthetic ETFs use the un-funded swap model. Under this

model, each ETF buys and holds a basket of securities and simultaneously enters into a swap agreement with a counterparty that commits to pay the index performance in exchange for the performance of the fund holdings. All Amundi's synthetic ETFs are domiciled in France.

Swap Counterparty

Each Amundi ETF enters into a swap agreement with a single counterparty. Société Générale Corporate and Investment Bank (SG CIB) is the swap provider for the firm's fixed-income ETFs. SG CIB's long term credit is rated A1 by Moody's, A by S&P, and A+ by Fitch.

Crédit Agricole Corporate and Investment Bank (CA CIB) (Aa3, A, A+) is used as swap counterparty for all other asset classes represented in the Amundi synthetic ETF range.

These banks were selected following an auction process which is implemented once every 5 years. The swap exposure is monitored daily by Amundi's risk department.

European Synthetic ETF Providers

ETF Provider	Parent Entity	Country	Synthetic ETFs	Total ETFs	Total AUM EUR Bn
Amundi	Crédit Agricole (75%), Société Générale (25%)	France	100	103	7.17
ComStage	Commerzbank	Germany	94	96	5.32
Credit Suisse AM	Credit Suisse	Switzerland	5	58	12.73
db X-trackers	Deutsche Bank	Germany	218	220	34.59
EasyETF	BNP Paribas	France	38	48	3.33
ETFlab	DekaBank	Germany	2	40	3.87
ETF Securities	ETF Securities	United Kingdom	27	27	0.53
iShares	BlackRock, US	United States	7	185	90.49
Lyxor AM	Société Générale	France	191	191	29.46
Ossiam	Natixis	France	6	7	0.31
PowerShares	Invesco PowerShares	United States	3	19	1.19
RBS Market Access	The Royal Bank of Scotland	United Kingdom	29	29	0.96
Source	Bank of America Merrill Lynch, Goldman Sachs, J.P. Morgan, Morgan Stanley and Nomura	United Kingdom	61	67	4.77
SpotR	SEB	Sweden	3	3	0.12
UBS GAM	UBS	Switzerland	20	67	9.47
XACT ETF	Handelsbanken	Sweden	13	25	2.43
Total			811	1180	206.81

Source: ETF Providers and Morningstar, Inc. Data as of 31 March 2012.

Substitute Basket

For equity ETFs, Amundi invests in European equities of the STOXX Europe 600 Index and/or in stocks contained in the underlying index.

For fixed income and commodity ETFs, Amundi invests in Investment Grade (IG) bonds issued by OECD countries and to a lesser extent IG corporate or covered bonds¹⁵.

The funds cannot hold CFDs, certificates or structured products (e.g. ABS, CDO, CDS). Also, Crédit Agricole and Société Générale shares or bonds are excluded from the selection universe.

The correlation between substitute baskets and underlying indices is not necessarily taken into consideration. Substitute baskets are held in segregated accounts at third party custodian CACEIS Bank and monitored daily by Amundi's asset managers.

Swap Reset Policy

Amundi has a target of zero counterparty exposure, which means that swaps are reset whenever their marked-to-market value becomes positive. This zero counterparty exposure objective may lead to negative swap values, which is equivalent to an over-collateralisation of the funds.

Disclosure

Amundi publishes the composition of substitute baskets on its website (amundiETF.com) with a three-day delay, along with counterparty names, swap exposure levels and the type of swap structure used.

Securities Lending

Amundi's swap-based ETFs do not engage in securities lending.

Swap Costs

The swap counterparty charges swap spreads to Amundi ETFs (on average: zero basis points per annum for equity ETFs, 5 basis points per annum for fixed income ETFs, and 30 basis points per annum for commodity ETFs). Swaps are renegotiated every 5 years

ComStage ETF

ComStage, the ETF brand of Commerzbank, launched its first synthetic ETFs in August 2008. ComStage currently offers 94 swap-based ETFs, out of a total product range of 96 ETFs.

ComStage ETFs employ the un-funded swap model. Each ETF buys a basket of securities from Commerzbank and simultaneously enters into a swap agreement with the bank which commits to pay the index performance (adjusted for the swap fees) in exchange for the performance of the fund holdings.

ComStage ETFs are domiciled in Luxembourg.

Swap Counterparty

ComStage ETF uses only one swap counterparty, Commerzbank AG. Its long term credit is rated A2 by Moody's, A by S&P and A+ by Fitch.

No bidding process is currently implemented when shopping for swaps. However independent price checks are performed.

Substitute Basket and Collateral

ComStage ETFs hold only European blue chip stocks (constituents of the DAX, EURO STOXX 50 or the STOXX Europe Large 200) in their substitute baskets.

Correlation between the fund holdings and the underlying indices is not taken into consideration.

Substitute baskets are held in segregated accounts at the custodian BNP Paribas Securities Services and monitored daily by ComStage's management company, Commerz Funds Solutions SA (a Commerzbank's subsidiary), as well as the custodian.

The swap counterparty is requested to post collateral equivalent to 105% of the positive swap marked-to-market value. The collateral, which could consist of government bonds from Germany, the UK and/or France, is held

by Commerzbank in a segregated pledged account at Clearstream Banking, Luxembourg. Currently only German government bonds are used.

Swap Reset Policy

Swaps are reset three to four times per year and whenever there is a creation/redemption.

Instead of resetting the swap when it has a positive marked-to-market value, ComStage requests the swap counterparty to post collateral in between resets. This helps further mitigate counterparty exposure. Collateral is adjusted on a daily basis to ensure 105% collateralisation of the swap exposure.

Disclosure

Fund holdings, swap values and counterparty risk exposure expressed as a percentage of funds' NAV are published weekly on ComStage ETF's website (<http://www2.comstage.commerzbank.com/News/PressArticles.aspx?c=30230>) "Swap and Equity Quotas Report", "Swap Collateral" and "Swap Carrier Basket".

Securities Lending

Up to 100% of fund holdings can be lent to Commerzbank for a fee which will be fully passed back to the fund. As this practice potentially introduces additional counterparty risk at the fund level, Commerzbank will be requested to post collateral equivalent to a minimum of 100% of the loan value. Commerzbank may, in turn, lend the assets to third parties in exchange for collateral.

Swap costs

Commerzbank charges ComStage ETFs varying swap costs which depend on the reference index being replicated.

Credit Suisse ETFs

Credit Suisse launched its first swap-based ETFs in August 2010. The bank currently provides five swap-based ETFs, out of a total offering of 58 funds in Europe. CS ETFs use the un-funded swap model. Each ETF buys a basket of securities from Credit Suisse and simultaneously enters into a swap agreement to receive the index

performance (less swap fees) in exchange for the performance of the fund holdings.

Swap Counterparty

Each Credit Suisse ETF enters into a swap agreement with a single counterparty, Credit Suisse Securities (Europe) Limited (CCSEL), a fully-owned subsidiary of Credit Suisse AG. Its long term credit is rated Aa2 by Moody's, A by S&P, and A by Fitch.

Substitute Basket

CS ETFs intend to only hold high quality, liquid "blue-chip" European equities.

Correlation between the substitute baskets and the underlying indices is not taken into consideration.

The holdings are monitored daily by the asset manager.

Substitute baskets are held in segregated accounts at Credit Suisse's custodian, BNY Mellon Trust Company (Ireland) Ltd.

Swap Reset Policy

Swaps are reset to zero at the end of each business day, so the counterparty risk that investors are exposed to is restricted to just that day's relative movements in the index and substitute basket.

With the daily swap reset resulting in 100% of the marked-to-market exposures paid back into the ETF in the form of cash (which is then reinvested in further substitute basket assets), counterparty exposure is reduced to zero at the end of each business day.

Disclosure

Fund holdings are published every business day on the CS ETF Web site (www.csetf.com).

Additionally, Credit Suisse discloses counterparty names and swap spreads on factsheets, which are updated on a regular basis.

Securities Lending

Credit Suisse's synthetic ETFs don't currently engage in securities lending.

Swap Costs

Credit Suisse charges swap spreads to CS ETFs. These costs vary depending on the underlying index and are reflected in the funds' performance.

Swap spreads are quoted in percentage terms on an annualised basis. The spreads are accrued daily and paid periodically (usually monthly).

db X-trackers

db X-trackers launched its first swap-based ETFs in January 2007. It currently provides 218 swap-based funds, out of a total offering of 220 ETFs.

db X-trackers employs two different synthetic replication strategies within its synthetic ETF range: the un-funded swap model and the funded swap model.

The un-funded swap structure is used for all db X-trackers fixed income ETFs as well as for its EURO STOXX 50, DAX, CAC 40 (long and short), MSCI World and Shariah-compliant ETFs. Under this model, the ETF buys a basket of securities from Deutsche Bank and simultaneously enters into a swap agreement to receive the index performance (net of fees) in exchange for the performance of the fund holdings.

The funded swap model is used for all remaining equity ETFs, as well as currency, commodity and alternative ETFs. The ETF enters into a funded swap with Deutsche Bank to receive the index return. The fund transfers cash from investors to Deutsche Bank which in turn posts collateral in a segregated account in the name of Deutsche Bank and pledged in favour of the fund.

db X-trackers' swap-based ETFs are domiciled in Luxembourg (save its ETFs of ETFs, which are domiciled in Ireland).

Swap Counterparty

db X-trackers ETFs contract swap agreements with a single swap counterparty, Deutsche Bank AG (Aa3, A+, A+).

In the event of a downgrade of Deutsche Bank AG's credit rating, other swap counterparties will be considered as a replacement.

Substitute Basket and Collateral

Substitute baskets for db X-trackers fixed income and money market ETFs consist of sovereign and investment grade corporate and covered bonds. The aim is to have a high degree of correlation between the substitute basket and the relevant underlying index.

For all equity, currency, commodity and alternative ETFs, db X-trackers accepts a mix of sovereign and investment grade bonds and highly liquid blue chip stocks from OECD countries, including European, US and Japanese equities.

In the funded swap model, haircuts are applied to the securities posted as collateral: 7.5%-20% for equities, 10% for corporate bonds and 0% for government bonds. This typically results in over-collateralisation. Collateral value is monitored on a daily basis to ensure that the exposure to the counterparty remains over-collateralised, i.e. the net counterparty exposure is maintained at zero.

For equity ETFs cross-listed in Hong Kong, db X-trackers operates a collateral pool structure (most of which offer exposure to Asian securities). Under this structure, each fund has a share of the pledged collateral pool allocated on a pro-rata basis (based on asset size).

Substitute/collateral baskets and collateral pools are held in ring-fenced accounts at the funds' custodian, State Street Bank Luxembourg or the funds' collateral manager, Bank of New York Mellon Luxembourg and reviewed daily by State Street Global Advisors (SSgA).

In the case of an enforcement event—which could be any of a number of a wide range of actual and/or potential default or termination events on the part of Deutsche

Bank—those db X-trackers ETFs using funded swaps will be entitled by Luxembourg law at that time to enforce the pledge and sell the collateral assets without giving prior notice to Deutsche Bank.

Swap Reset Policy

db X-trackers ETFs using un-funded swaps see their swaps reset to zero whenever (i) there is a creation/redemption at the fund level and/or (ii) the counterparty exposure reaches 5% of the fund's NAV. So each fund has a maximum counterparty exposure of 5% at the end of any trading day. The reset can be done on a daily basis.

Disclosure

db X-trackers discloses extensive details about substitute and collateral baskets on a daily basis on its website (www.etf.db.com). Published information includes type of swap structure used (funded or un-funded), net swap exposure as a percentage of NAV, substitute basket/collateral composition by security type, country, sector, currency, exchange listing and, for bonds, credit rating.

Securities Lending

db X-trackers ETFs don't engage in securities lending.

Swap Costs

Deutsche Bank provides swaps to most db X-trackers' ETFs with zero spread. However, in the case of some emerging markets equity and short equity ETFs a portion of the costs (slippage fees and borrowing costs) incurred as part of the index replication may be partially passed on by Deutsche Bank to the ETF under the swap agreement. These numbers are published in the audited annual reports.

EasyETF

Synthetic replication was first used by EasyETF, BNP Paribas's ETF line-up, in 2005.

EasyETF's offering currently consists of 38 swap-based ETFs, out of a total of 48 ETFs.

EasyETF employs the un-funded swap model. Each EasyETF ETF buys a basket of securities and simultaneously enters into a swap agreement with a counterparty that commits to pay the index performance (adjusted for the swap fees) in exchange for the performance of the fund holdings.

EasyETF ETFs are domiciled in either Luxembourg or France.

Swap Counterparty

EasyETF ETFs enter into swap agreements with either a single or multiple counterparties.

EasyETF follows the best execution principle defined by the European Markets in Financial Instruments Directive (MiFID) with respect to the implementation of a bidding process. Counterparties are chosen from a list of eligible banks which currently include BNP Paribas (rated Aa3 by Moody's, AA- by S&P and A+ by Fitch), Goldman Sachs (A1, A-, A1), Société Générale (A1, A, A+) and Merrill Lynch (Baaa1, A-, A).

The full list of counterparties is periodically reviewed by BNP Paribas's Global Counterparty Committee and Credit Risk team.

EasyETF can split exposure amongst multiple counterparties in order to diversify credit risk. The split between counterparties is determined by various factors including the competitiveness of its price offering, credit rating and quality of service.

Counterparty risk is monitored daily by BNP Paribas Investment Partners' risk control department.

Substitute Basket

EasyETF invests in eurozone large capitalisation stocks for its equity ETFs and 3-month treasury bills (in EUR or USD) with a minimum rating of AA for fixed income and commodity ETFs.

When constituting the substitute baskets, EasyETF prioritises the liquidity of the securities over their correlation with the reference index.

The funds' holdings are held in segregated accounts at EasyETF's custodian, BNP Paribas Security Services.

Swap Reset Policy

Equity and fixed income ETFs are automatically reset quarterly, and commodity ETFs, monthly, even if the total counterparty exposure is below 10% of the fund's NAV on those dates.

Equity swaps are also manually reset to zero (i) before total counterparty exposure reaches 10% of the fund's NAV or (ii) when there is a large creation/redemption. So each fund has a maximum counterparty exposure of 10% at the end of any trading day.

For fixed income and commodity ETFs, swaps are collateralised between resets with sovereign securities that have a minimum rating of AA. This helps further mitigate counterparty risk.

Disclosure

Fund holdings and names of swap counterparties are currently disclosed upon request but will soon be published online.

Securities lending

EasyETF's synthetic ETFs don't currently engage in securities lending.

Swap costs

Swap costs charged to EasyETF funds vary depending on the underlying index and are reflected in the fund performance.

Swaps are renegotiated every 6 to 12 months but can also be terminated at any time without warning using the early termination clause.

ETFlab

ETFlab Investment GmbH, a subsidiary of DekaBank Deutsche Girozentrale, launched its first synthetic ETFs in December 2009. The company currently offers two swap-based ETFs out of a total of 40 ETFs.

ETFlab uses the unfunded swap model. Each ETF buys a basket of securities and simultaneously enters into a swap agreement with DekaBank which commits to pay the index performance in exchange for the performance of the fund holdings.

All ETFlab ETFs are domiciled in Germany.

Swap Counterparty

ETFlab contracts with one or multiple swap counterparties. Currently, ETFlab uses a single counterparty, DekaBank. Its long term credit rating is Aa3 by Moody's and A by S&P.

No bidding process is currently implemented when shopping for swaps. However independent price checks are performed.

Swap exposure is monitored daily by ETFlab and the funds' custodian DekaBank.

Substitute Basket and Collateral

Substitute baskets for ETFlab ETFs consist of European blue chip stocks (usually Eurozone Large Cap Equities that belong to the Deutsche Börse's SWAXX Index).

These assets are held in segregated accounts at the custodian DekaBank and monitored daily by ETFlab and DekaBank.

In addition to the substitute basket, the swap counterparty is requested to post collateral equivalent to up to 130% of the swap value. The collateral, which currently consists of German government bonds, is held by DekaBank in a pledged account.

Swap Reset Policy

Swaps are reset to zero whenever (i) there is a creation/redemption, (ii) the swap value reaches 3.5% of the fund's NAV and (iii) at a minimum of once per quarter.

ETFlab requests the swap counterparty to post collateral in between resets to further mitigate counterparty risk. Collateral is adjusted on a daily basis to ensure 130% collateralisation of the swap exposure.

Disclosure

ETFlab publishes fund holdings daily on its website (www.etflab.de), along with sector aggregate exposure, country aggregate exposure and swaps' value.

Securities Lending

ETFlab's synthetic ETFs currently don't engage in securities lending.

Swap Costs

DekaBank charges swap costs which depend on the reference index and current market prices.

ETF Securities

ETF Securities launched its first UCITS-compliant synthetic ETFs in September 2008.

ETF Securities may use both un-funded and funded swaps at the same time for the products on its ETF Exchange platform (ETFX), which currently includes 27 swap-based ETFs, out of a total ETF offering of 27 in Europe.

The ETFX un-funded model is slightly different from the generic un-funded model described earlier in this report in that the investor's cash is invested in a basket of securities by way of a repurchase agreement (repo) and any remaining cash is invested in money market funds in order to satisfy any margin calls from the swap providers. Allocating a fund's cash to a repo instead of a substitute basket allows for over-collateralisation.

Under the funded model, investors' cash is transferred to the swap counterparty in exchange for the index performance (adjusted for the swap spread). The swap counterparty posts cash as collateral in the name of the fund. All ETFX funds are domiciled in Ireland.

Swap Counterparty

Each ETF on the ETF Exchange platform (ETFX) generally contracts with multiple swap providers. These counterparties are primarily selected according to their creditworthiness and currently include Citigroup Global Markets Limited (rated A3 by Moody's, A- by S&P, A by

Fitch), Merrill Lynch International Bank Limited (Baa1, N/A, A), Barclays Bank Plc (A1, A, A) and Rabobank International (Aaa, AA, AA).

The minimum number of swap providers for each ETF is one. As a result, at any given time, a fund may have exposure to a single counterparty while another may have exposure to two, three or all four counterparties.

Merrill Lynch, Citigroup and Barclays provide unfunded swaps while swaps with Rabobank are fully-funded.

Collateral

ETF Securities accepts a list of securities as collateral on the repo agreement, to which haircuts are applied: 5% for equities that belong to major benchmarks such as S&P 500 and EURO STOXX 50; and 10% for other stocks from developed market indices like the Nasdaq, STOXX 600 and TOPIX. This results in over-collateralisation.

Other eligible collateral includes AAA Government or Treasury money market funds, sovereign fixed income (G10 and other European government bonds with minimum AA-rating), Supranational bonds, US agencies backed by the US government. All bonds are subject to haircuts ranging from 0-2% depending on the maturity and issuer in question.

Unlike the other swap providers on ETFX, Rabobank doesn't transfer securities as collateral on the funded swaps but instead transfers cash equating to 102% of the swap value. This cash received as collateral is then invested in AAA money market funds.

ETF Securities does not intend to maintain a specific degree of correlation between the substitute basket and the fund's benchmark.

Collateral is held by the fund's custodian, BNY Mellon Trust Company Limited (Ireland) (BONY), in a ring-fenced segregated account. It is also marked-to-market daily by BONY. The counterparty exposure is monitored daily by the investment manager, ETFX Investment Management LLP.

The title to all collateral is transferred to the fund in both the unfunded and the funded models.

Swap reset policy

Un-funded swaps with Merrill Lynch and Citigroup are reset monthly and not according to exposures. Instead, cash margin calls are implemented typically whenever counterparty exposure reaches between 1 and 2.5% of the fund's position with the bank. This works both ways, i.e. the bank may also call collateral back should they be 1-2.5% exposed to the fund.

Un-funded swaps with Barclays and fully-funded swaps with Rabobank are reset daily.

Disclosure

ETF Securities publishes collateral holdings on a daily basis along with method of synthetic replication used and collateralisation levels on its website (http://www.etfsecurities.com/en/securities/etfs_collateral.asp).

Securities Lending

ETF Securities does not engage in securities lending.

Swap Costs

The swap costs will vary depending on the underlying index.

iShares

iShares, BlackRock's ETP business, first used synthetic replication in Europe in September 2010. The firm currently offers seven swap-based ETFs out of a total product range of 185 in the EMEA region.

iShares employs the funded swap structure. Each ETF enters into a funded swap with multiple counterparties to receive the index return (adjusted for the swap fees). The fund transfers cash from investors to the banks who in turn post collateral in the name of the fund.

All iShares' synthetic ETFs are domiciled in Dublin.

Swap Counterparty

iShares uses multiple swap counterparties for each of its swap-based ETFs. Independent counterparty monitoring is performed by BlackRock Risk & Quantitative Analysis group. Currently only banks with a credit rating of A or higher are considered to provide swaps.

Current counterparties include UBS (Aa3 by Moody's, A by S&P, A by Fitch), Credit Suisse (Aa1, A+, A), and RBS (A2, A, A).

New/existing providers may be added or removed subject to the suitability of swap arrangements agreed with the provider.

Collateral

The securities which can be used as collateral for the swap include G10 government bonds and developed market equities, to which margins are applied: 20% for equity collateral and up to 3% for bond collateral. These margins result in over-collateralisation.

Correlation between the collateral basket and the underlying index is not taken into consideration.

Collateral is held in a ring-fenced account at a third party collateral agent, State Street Custodial Services (Ireland). The fund has full legal title of the collateral assets and the swap counterparties have no recourse over the assets posted.

Collateral manager Bank of New York Mellon (BONY) monitors the collateral value and counterparty exposure on a daily basis to ensure that net counterparty exposure is maintained at zero.

Disclosure

iShares publishes the composition of collateral holdings along with sector aggregate exposures on a daily basis on its website (www.ishares.com/global) where it also discloses the method of synthetic replication used, counterparty names, total counterparty exposure levels, total collateral levels and swap costs.

Securities Lending

iShares' Dublin-domiciled swap-based ETFs do not engage in securities lending.

Swap Costs

Each swap counterparty charges a swap spread, which is added to or deducted from the index return delivered to the investor. This swap spread is calculated via a pricing algorithm based on the swap spreads quoted by the swap counterparties supporting the ETF and benchmarked to standard market swap quotes.

Swap fees are renegotiated each month when swaps are reset and published daily on the website.

Lyxor

Lyxor was the earliest adopter of synthetic replication in Europe. The fully-owned subsidiary of Société Générale rolled out its first swap-based ETFs in 2001.

The company currently offers 191 ETFs, all of which are swap-based.

Lyxor ETFs use the un-funded swap model. Typically, each ETF buys a basket of securities from Société Générale and simultaneously enters into a swap agreement with the bank which commits to pay the index performance (net of fees) in exchange for the performance of the fund holdings.

Lyxor ETFs are UCITS compliant and domiciled either in France or in Luxembourg.

Swap Counterparty

A Lyxor ETF enters into a swap agreement with a single counterparty which is Société Générale. Its long term credit is rated A1 by Moody's, A by S&P and A+ by Fitch. Following the Best Execution principle defined by the European Markets in Financial Instruments Directive (MiFID), Lyxor challenges the swap prices offered by Société Générale by putting the bank in competition with other swap providers. If one or more swap providers offer better pricing, Société Générale will structure the swap

agreement(s) on a back-to-back basis. This means that Société Générale will end up providing the swap to the fund and Société Générale will enter into a swap agreement with a third party to provide the performance of the underlying index. Even in these cases, counterparty risk will always lie directly with Société Générale.

To benchmark Société Générale's swap pricing, Lyxor monitors around ten global investment banks with a minimum credit rating of "A" from S&P.

Substitute Basket

For equity and commodity ETFs, Lyxor buys highly liquid equities from OECD countries. The majority of Lyxor funds is eligible for the PEA (the French Equity Savings Plan) and therefore hold a minimum of 75% in European stocks and in practice close to 92% in international large-cap stocks. No Société Générale shares are held in the substitute baskets, except for the EURO STOXX 50 and CAC 40 ETFs where Soc Gen shares are held in line with their respective weight in the indices.

For fixed income ETFs, the substitute baskets are comprised of sovereign and covered bonds with a minimum rating of A- as well as corporate bonds with a minimum rating of BBB-. If no rating is available, only bonds issued or guaranteed by a Eurozone sovereign issuer will be selected.

Lyxor's equity and commodity ETFs also invest up to 8% in a fund that holds UK equities via a repo (the fund lends out up to 100% of its cash and receives UK equities as collateral).

Fund holdings, which are monitored daily by Lyxor's asset manager, are held in segregated accounts at Lyxor's custodian, Société Générale Security Services.

Swap Reset Policy

As the company has a daily target of zero counterparty exposure, swaps are reset whenever their value becomes positive. Swaps may sometimes have a negative value (between -2% and 0%), which is equivalent to an over-

collateralisation of the funds. A negative swap value means that the fund owes the counterparty money.

Disclosure

Lyxor provides daily disclosure of fund holdings, swap exposures and identity of swap counterparties on its website (www.lyxoretf.com).

Securities Lending

Lyxor ETFs do not engage in securities lending.

Swap Costs

Swap counterparties charge swap spreads to Lyxor ETFs. These costs vary according to prevailing repo rates and market conditions. They also vary from asset class to asset class. There are additional swap fees for creations/redemptions.

Swaps are renegotiated once a year, although at all times the swap costs are subject to daily monitoring by Lyxor.

Ossiam

Ossiam, an affiliate of Natixis Global Asset Management, launched its range of synthetic ETFs in May 2011. The firm currently offers 6 swap-based ETFs out of a total of 7 ETFs.

Ossiam ETFs use the un-funded swap model. Each ETF buys a basket of securities and simultaneously enters into a swap agreement with one or several counterparties which commit to pay the index performance (adjusted for the swap price) in exchange for the performance of the fund holdings.

All Ossiam funds are domiciled in Luxembourg.

Swap Counterparty

Each Ossiam ETF enters swap agreements with a single or multiple counterparties. Ossiam follows the best selection principles defined by the European Markets in Financial Instruments Directive (MiFID). These counterparties are selected through a bidding process that considers several factors including counterparty credit rating, swap price and quality of the securities provided.

Currently, eight counterparties have been included in the selection process. These include BNP Paribas (Aa3 by Moody's, AA- by S&P and A+ by Fitch), Morgan Stanley (A2, A-, A,) and Natixis (Aa3, A, A+,) and JP Morgan (Aa3, A, AA-). This list is actively monitored and reviewed periodically. New/existing providers may be added or removed according to the suitability of swap arrangements agreed with the counterparty.

There is no minimum number of swap providers for each ETF. As a result, at any given time, a fund may have exposure to a single counterparty while another may have exposure to several counterparties. The level of exposure to any given swap counterparty varies according to the price and the minimum/maximum size of the swaps as well as the liquidity and the size of the fund.

Counterparty exposures are monitored on a daily basis by Ossiam (by the Chief Compliance Officer, the Chief Investment Officer and the Chief Risk Officer) as well as the custodian, State Street Bank Luxembourg S.A. The maximum aggregate exposure to swap counterparties should not exceed 7%.

Substitute Basket

Substitute baskets consist of highly liquid equities from OECD countries. Some of Ossiam's funds are eligible for the PEA (the French Equity Savings Plan) and therefore hold a minimum of 75% in European stocks. Ossiam strives to invest in the securities that make up the fund's underlying index and achieve the highest correlation possible between the fund holdings and the underlying index. Substitute baskets are monitored by Ossiam and held by each of the funds in custody with State Street Bank Luxembourg S.A.

Swap Reset Policy

Swaps are reset to zero every time (i) there is a creation/redemption, (ii) the aggregate counterparty exposure is about to exceed 7% of the fund's NAV and (iii) at a minimum of once per quarter.

Disclosure

Ossiam publishes fund holdings on its website (www.ossiam.com) with a two-day delay (due to index provider constraints), along with counterparty names and swap exposure levels per counterparty.

Securities Lending

Ossiam ETFs do not engage in securities lending.

Swap Costs

The average swap cost per ETF class may vary.

Fees for creations/redemptions are charged to authorised participants (APs) and cover the execution costs of the swap counterparty on the components of the index as well as some other administrative costs. Fees typically decrease with size. For all of Ossiam's European ETFs, annual swap fees range from 3.5 to 5 bps depending on size. Swaps are re-negotiated at least once a year.

PowerShares

PowerShares, the ETF brand of Invesco Asset Management, launched its first synthetic ETFs in January 2011. The firm currently offers three swap-based ETFs, out of a total offering of 19 ETFs in Europe.

PowerShares ETFs employ the un-funded swap model. Each ETF buys a basket of securities from Morgan Stanley and simultaneously enters into a swap agreement to receive the index performance (net of fees) in exchange for the performance of the fund holdings.

PowerShares' synthetic ETFs are domiciled in Ireland.

Swap Counterparty

Each PowerShares ETF enters into a swap agreement with a single counterparty, Morgan Stanley. Its long term credit is rated A2 by Moody's, A- by S&P and A by Fitch.

PowerShares has selected its swap counterparty on the basis of several criteria including price, credit rating and quality of services.

Counterparty exposure is monitored by Bank of New York Mellon, Ireland as well as PowerShares' compliance and risk departments.

Substitute Basket

Fund holdings consist of cash and cash equivalents, e.g. corporate and government bonds with a residual maturity of less than one year and an average duration of 30 days. The bond issuers must have a minimum short term rating of A1-P1. For diversification purposes, the limit per issuer is 5% of the fund's NAV for bonds with a maturity greater than 7 days and 10% for bonds with a maturity of less than 7 days.

When composing the substitute baskets, PowerShares prioritises the liquidity of the securities over their correlation with the reference index.

Fund holdings, which are monitored daily by Invesco Asset Management, are held in segregated accounts at the custodian Bank of New York Mellon, Ireland.

Swap Reset Policy

Swaps are reset to zero whenever (i) counterparty exposure reaches 3% of the fund's NAV and (ii) on a monthly basis.

Disclosure

PowerShares discloses fund holdings on a daily basis on its website (www.invescopowershares.net) together with counterparty names, the type of swap structure used, the swap reset term and reset thresholds.

Securities Lending

PowerShares' synthetic ETFs do not engage in securities lending.

Swap Costs

PowerShares charges swap fees for units created/redeemed in the primary market. These fees depend on the underlying index. Swap fees are renegotiated each month when swaps are reset.

RBS Market Access ETFs

RBS Market Access ETFs employ a synthetic replication strategy. RBS' first ETF was launched in May 2006. The company currently offers 29 ETFs, all of which are swap-based.

The majority of RBS Market Access ETFs utilise an unfunded swap model. Under this structure, each ETF buys a basket of securities from The Royal Bank of Scotland and simultaneously enters into a swap agreement with the bank which commits to pay the index performance (net of swap fees) in exchange for the performance of the substitute basket.

One ETF in the RBS Market Access range utilises the funded swap model. Under this structure, the ETF pays its subscription proceeds upfront to the swap counterparty who returns this amount at maturity plus or minus the index return (and net of swap fees). The swap counterparty posts collateral in the name of the fund (transfer of title).

RBS Market Access ETFs are sub-funds of the RBS Market Access SICAV which is domiciled in Luxembourg.

Swap Counterparty

Currently the sole swap counterparty for RBS Market Access ETFs is The Royal Bank of Scotland plc. Its long term credit is rated A2 by Moody's, A by S&P, and A by Fitch.

There is no bidding process in selecting the swap counterparty for each new ETF but the selection of swap counterparties is re-assessed periodically on the basis of commercial criteria and legal & regulatory requirements.

Counterparty exposures are monitored daily by RBS Luxembourg S.A., the management company.

Substitute Basket and Collateral

Substitute/collateral baskets consist of highly liquid large cap securities listed on recognised regulated markets. Typically this means stocks from Western European countries, the US, Japan, Australia and Canada.

In the case of a funded swap, the collateral posted to the fund amounts to 125% of the counterparty exposure being collateralised (typically 93% of NAV). This ensures a minimum level of collateralisation of 116.25% (125% times 93%) of the fund's net asset value.

The funds don't target a specific degree of correlation between their holdings/collateral and reference indices.

Substitute/collateral baskets are monitored daily and held in ring-fenced segregated accounts by the custodian, RBC Dexia Investor Services Bank.

Swap Reset Policy

Un-funded swaps are reset to zero every time (i) the counterparty exposure exceeds 7% of the fund's NAV (5% in the case of leveraged long and short ETFs), (ii) there is a creation/redemption and (iii) at a minimum of once per month.

Disclosure

RBS Market Access discloses fund holdings/collateral, method of synthetic replication used (funded or unfunded), level of swap counterparty exposure and swap costs daily on its website (www.rbs.com/etfs).

Securities Lending

RBS Market Access doesn't currently engage in securities lending for any of its ETFs.

Swap Costs

Swap fees for RBS Market Access ETFs range from zero to 40 basis points per annum depending on the index being replicated. The median swap fee is 10 basis points per annum. Swap costs are reviewed regularly.

Source

Source is an ETP provider owned by a group of investment banks, including Bank of America Merrill Lynch, Goldman Sachs, J.P. Morgan, Morgan Stanley and Nomura. Its first synthetic ETFs were launched in April 2009. The firm currently offers 61 swap-based ETFs out of a total of 67 ETFs.

For most of its equity and alternative products, Source uses the un-funded swap model. Each ETF typically buys baskets of securities from multiple banks who act as swap counterparties. Through the swap agreements, each bank commits to pay the index performance (adjusted for the swap fees) in exchange for the performance of the basket they delivered.

Source's synthetic ETFs are domiciled in Ireland.

Swap Counterparty

Source generally contracts with multiple swap counterparties. These counterparties are chosen from a list of eligible banks including Bank of America Merrill Lynch (Baa1, A-, A), Goldman Sachs (A1, A-, A), Morgan Stanley (A2, A-, A), JPMorgan (Aa3, A, AA-) and Nomura (Baa2, BBB+, BBB). Citigroup, UBS and Barclays Capital also act as swap counterparties for Source's commodity ETF. This list is actively monitored and reviewed periodically.

There isn't a minimum number of swap counterparties for each ETF. As a result, at any given time, a fund may have exposure to a single counterparty while another may have exposure to all five counterparties.

Counterparty exposures are monitored daily by Assenagon Asset Management S.A, the investment manager of Source ETFs and the Source Credit Committee.

Substitute Basket

Source equity and alternative ETFs' substitute baskets consist of a wide range of listed equities. Exempted securities are securities issued by an entity of the same financial group or stock or securities of other authorised participants.

Source strives to achieve a very high degree of correlation between the assets held by the fund and the fund's benchmark index.

The funds' holdings are monitored by Assenagon Asset Management S.A. and the Source Credit Committee. They are held through Northern Trust, in segregated ac-

counts by sub-custodians, e.g. BNP Paribas, Deutsche Bank, Euroclear Bank.

Swap Reset Policy

Swaps are reset to zero every time (i) a swap counterparty executes a creation or redemption, (ii) the mark-to-market exposure of a swap is in excess of €100,000 or greater than 0.20% of fund assets (iii) the aggregate counterparty exposure reaches 4.5% of the fund's NAV and (iv) at a minimum of once per month.

Swaps are often not reset when their mark to market value becomes negative, i.e. based on the fund owing the swap counterparty money.

Disclosure

Source publishes the fund holdings daily on its website (www.source.info, after signing in) where it also discloses sector aggregate exposure, country aggregate exposure, average swap levels and swap costs.

Securities Lending

Source's equity and alternative ETFs currently do not engage in securities lending.

Swap Costs

The swap costs for Source's ETFs depend on the specific product; however many funds do not incur any swap fees at all.

SpotR

SpotR, the ETF brand of SEB Investment Management AB, launched its first ETFs in March 2011. The company currently offers three UCITS ETFs which all rely on swaps to track the underlying index.

SpotR employs two different synthetic replication strategies within its ETF range: the funded swap model and a model that combines funded and un-funded swaps.

For its un-leveraged products, SpotR uses the funded model alone whereby each ETF transfers cash from investors to the swap counterparty (SEB AB) in exchange for

the index performance plus the principal at a future date. In turn, the swap counterparty posts collateral in a segregated account in the name of the fund (transfer of title).

For its leveraged and inverse ETFs, SpotR utilises a 50/50 combination of funded and un-funded swaps. The funded swap is used to deliver the un-leveraged index performance while the un-funded swap is used to achieve the leveraged or inverse index performance. The swap counterparty posts collateral in a segregated account in the name of the fund (transfer of title) with a collateral value at least equal to the combined market value of the funded and unfunded swap.

SpotR is structured as a company with multiple sub-funds (SICAV), each sub-fund being an ETF.

SpotR ETFs are domiciled in Luxembourg.

Swap Counterparty

SpotR ETFs may enter into swap agreements with a single or multiple swap providers. However SpotR currently uses only one swap counterparty, Skandinaviska Enskilda Banken AB. SEB's long term credit is rated A1 by Moody's, A+ by S&P and A+ by Fitch.

The swap provider(s) are selected by the fund company board of directors and are limited to first class institutions standing under prudential supervision and belonging to the categories approved by the CSSF (the Luxembourg supervisor). Swap providers are evaluated semi-annually based on pricing, agreement terms, operational management, service level, collateral arrangements and creditworthiness. If the review reveals that using multiple counterparties is superior in the prevailing market environment, additional counterparties will be selected.

Counterparty exposures are monitored on a daily basis by SEB Fund Services S.A. (i.e. Management Company).

Substitute Basket and Collateral

Substitute/collateral baskets consist of stocks belonging to main global indices as well as government bonds and

bills issued by Germany, Sweden, the UK and the US with a residual maturity of less than 5 years. Securities received as collateral are subject to haircuts of up to 30%. This means that SpotR ETFs are usually over-collateralised by approximately 105-115%.

The degree of correlation between the collateral baskets and the underlying indices is taken into consideration when assigning haircuts together with volatility, creditworthiness and the liquidity of the eligible securities.

Collateral is managed by the SEB Prime Collateral Services.

Collateral is held in the name of each fund in a segregated account with SpotR's custodian, Skandinaviska Enskilda Banken S.A, Luxembourg, monitored by the custodian.

Swap Reset Policy

SpotR ETFs reset swaps monthly and whenever there is a creation/redemption. The inverse/leveraged ETFs are reset in accordance with the leverage rebalancing.

Disclosure

SpotR publishes collateral holdings daily on its website (www.spotr.se (Swedish) and www.sebgroup.com/spotr (English)) along with swap market value, collateral market value, haircut-adjusted collateral value, exchange rate used per security, collateralisation level and net counterparty risk exposure.

Securities Lending

SpotR ETFs do not engage in securities lending.

Swap Costs

SEB AB charges SpotR ETFs for swap spreads. The average cost varies depending on underlying exposure and the prevailing market conditions. There is no swap fee for creations and redemptions, which means that the ETF does not incur additional cost for increasing or decreasing its swap exposure.

UBS ETF

UBS introduced its first synthetic ETFs in July 2010 and currently offers 20 swap-based ETFs out of a total of 67 ETFs.

UBS currently uses two synthetic replication structures within its ETF range: the funded swap model, alongside a model that combines funded and un-funded swaps. However, all ETFs are expected to have moved to the combined model by the end of 2012.

Each UBS ETF employing only the funded swap structure passes cash received from investors to UBS AG in exchange for the index performance (adjusted for the swap fees). UBS AG in turn posts collateral in the name of the fund.

Each UBS ETF employing the combined model gains a target 20% of the index exposure via a fully funded swap and a target 80% via an un-funded swap. Cash allocated to the un-funded swap component is used to buy a basket of securities from UBS AG which commits to pay the index performance (net of swap fees) in exchange for the performance of the bought securities.

14 UBS UCITS-compliant synthetic ETFs are domiciled in Ireland and 6 non-UCITS compliant synthetic ETFs are domiciled in Switzerland.

Swap Counterparty

Each UBS ETF enters into a swap agreement with a single counterparty, UBS AG. Its long term credit is rated Aa3 by Moody's, A by S&P and A by Fitch. No bidding process is implemented.

Substitute Basket and Collateral

Substitute baskets consist of highly liquid global blue chip stocks.

The only securities accepted as collateral are G10 government & supranational bonds, to which a 5% margin is applied. Collateral is held via transfer of title in a segregated account with the fund's custodian, State Street Bank.

The counterparty exposure is monitored daily by the collateral manager, Lantern, the portfolio manager and the custodian.

Collateral is maintained at a target level of 105% of the fund's prevailing net asset value at the end of each business day. This means that when the marked-to-market value of the collateral falls below this level, additional collateral will be requested from the swap counterparty.

Swap reset policy

Any positive swap exposure is over collateralised.

Disclosure

UBS publishes snapshots of substitute and collateral baskets daily on its website (www.ubs.com/etf). Additional information available includes method of synthetic replication used (funded, un-funded), net swap exposure as a percentage of NAV, along with substitute/collateral basket composition by security type, country and currency.

Securities Lending

UBS synthetic ETFs don't engage in securities lending.

Swap Costs

UBS swap-based ETFs publish the total drag vs. the index (p.a.) which includes all costs including swap fees.

XACT ETF

XACT, the ETF brand of Handelsbanken Asset Management, introduced its first synthetic ETFs in September 2010. XACT currently offers 13 swap-based funds, out of a total product range of 25 ETPs in the Nordic region.

XACT ETFs employ the funded swap model. Each fund passes cash received from investors to Handelsbanken in exchange for the index performance (adjusted for the swap fees). In turn, Handelsbanken posts collateral in a pooled account.

All XACT UCITS-compliant synthetic ETFs are domiciled in Luxembourg.

Swap Counterparty

Each XACT ETF currently enters into a swap agreement with a single counterparty, Handelsbanken. Its long term credit is rated Aa2 by Moody's, AA- by S&P and AA- by Fitch. No bidding process is implemented.

Collateral

The only securities used as collateral for equity and commodity ETFs are stocks belonging to main global indices, to which a 20% haircut is applied. For fixed income ETFs, XACT accepts government and covered bonds, to which haircuts ranging from 0.5% to 7.5% are applied. These haircuts, which are applied in accordance with the relevant Luxembourg regulations, result in over-collateralisation.

XACT has two collateral pools in place. All equity and commodity ETFs share one pool; while all fixed income ETFs share the other. The assets are allocated to each ETF on a pro rata basis (based on their respective NAV) with a transfer of title in place. The allocation specifies which stock or bond belongs to which sub-fund. Each pool is held in a segregated account with third party custodian, Brown Brothers Harriman.

The collateral is monitored by the risk manager of the fund (an independent unit within Handelsbanken) and to some extent by the central administrator and custodian (BBH).

Whenever the value of the posted collateral (less haircuts and taking into account any risk add-ons on derivatives held by the fund) falls below the fund's prevailing net asset value, additional collateral will be requested from the swap counterparty. Typically, this means that for equity ETFs, new collateral will be posted when the value of the previously posted collateral falls below 125% of the fund's NAV. This is to ensure that net counterparty risk exposure is maintained at zero at the end of each business day.

Disclosure

The composition and level of collateral are published daily on XACT website (<http://en.xact.se/tools/collateral>).

Securities Lending

XACT's synthetic ETFs do not engage in securities lending.

Swap Costs

Swap costs for XACT ETFs depend on the underlying exposure. All swaps have a maturity of less than a year.

Synthetic ETFs in Asia: A Distinct Local Flavour

Hong Kong and Singapore are two key hubs within the Asian ETF market. Hong Kong-domiciled ETFs had assets under management (AUM) of USD 24bn as of the end of March 2012, while Singapore-domiciled ETFs had aggregate AUM of USD 1.5bn (we exclude cross-listed ETFs from these figures). Hong Kong and Singapore have also been at the center of developments within the realm of synthetic ETFs within the region. By regional standards, the ETF market in South Korea is fairly large (with USD 10bn in AUM as of end-March 2012, it is the second largest within Asia [ex-Japan]). South Korea was also one of the first movers in the ETF industry within Asia (ex-Japan) with its first ETF having been launched in 2002. But in South Korea, physical replication remains the focus. In other Asian countries, synthetic ETFs remain at the infant stage. Taiwan and Thailand host cross-listed synthetic ETFs from Hong Kong, whereas China and Malaysia do not have any synthetic ETFs trading on local exchanges. Here, we take a closer look at the synthetic ETF landscape in the major Asian markets—Hong Kong and Singapore.

While some of the synthetic ETFs listed in the region are simply cross-listings from European providers, many are homegrown and have a distinct local flavour from the perspective of the exposures they offer as well as how they are constructed. Most synthetic ETFs in Asia track Chinese A-Share benchmarks. Chinese companies issue a number of different types of shares to raise capital in both their domestic and international markets. The largest of these are A-Shares, which are issued by companies incorporated in China, and are listed on the Shanghai and Shenzhen stock exchanges. A-shares are only available to domestic Chinese investors and Qualified Foreign Institutional Investors (QFIIs). While China has historically maintained very tight capital controls, a quota-based QFI scheme was launched in 2002 to allow foreign investors who meet the scheme's requirements to invest directly in China A-Shares and bonds. The current quota under the QFI scheme is USD 80bn, which was raised in

April 2012 from a prior level of USD 30 billion.

There are a handful of different ways for foreign investors to gain exposure to the Chinese A-Share market. The most common methods include investing in (1) QFII funds or (2) ETFs which track the A-Share benchmarks synthetically (there are no offshore physical A-Share ETFs at the moment in light of certain regulatory and technical issues). However, regulations are changing. In December 2011, a Renminbi Qualified Foreign Institutional Investors (RQFII) scheme was launched. This is a policy initiative undertaken by the Chinese government to allow qualified RQFII holders to use Renminbi (RMB) raised in Hong Kong to invest in the Mainland securities market. There is a requirement that at least 80% of the total capital invested under the scheme must be invested in the Chinese bond market. Furthermore, in April 2012, the RQFII quota was increased from Rmb20bn to Rmb70bn. Also, the rules now allow financial institutions under the RQFII program to issue RMB denominated ETFs which invest in Chinese A-Shares to be listed in Hong Kong. As such, offshore physical A-Share ETFs are likely to be launched in the near future.

These changes should increase the width and depth of the range of ETFs tracking the A-Share market, offering further supply to meet international investors' strong appetite. As barriers to the creation of physical replication ETFs tracking Chinese A-share benchmarks are broken down, the landscape of synthetic ETFs in Asia will likely see significant changes.

History of Synthetic ETFs in Hong Kong

The iShares FTSE A50 China Index ETF (02823) was the first synthetic ETF to be launched in Hong Kong, making its debut in November 2004. The development of synthetic ETFs in Hong Kong did not advance further until April 2007 when Lyxor first promoted a number of synthetic ETFs, which were all cross-listings from their existing European lineup. By the end of March 2012, there were 50 synthetic ETFs listed in Hong Kong, compared to 89 locally listed ETFs in total. Note that these numbers exclude the 12 Lyxor ETFs that were delisted from the Hong Kong Exchange in March 2012.

Regulatory Framework

All ETFs listed in Hong Kong are required to obtain authorisation from the Securities and Futures Commission (SFC), an independent non-governmental statutory body responsible for regulating the securities and futures markets in Hong Kong. The Code on Unit Trust and Mutual Funds (UT Code) establishes the guidelines for the authorisation of ETFs.

In order to clearly distinguish between ETFs utilising physical and synthetic replication methods, effective from 22 November 2010, a marker “X” is required to be placed at the beginning of the English and Chinese stock short names of all synthetic ETFs. Furthermore, from 16 January 2011, synthetic ETFs are required to place an asterisk (*) and an annotation “*This is a synthetic ETF” immediately following the name of a synthetic ETF whenever it appears in offering documents, marketing materials, and all notices and communications with Hong Kong investors.

Collateral Requirements for Domestic Synthetic ETFs

Effective from 31 October 2011, all domestic synthetic ETFs (primarily listed in Hong Kong and authorised under the UT Code) with collateral arrangements are required to top-up collateral on a daily basis to achieve at least 100% collateralisation. Synthetic ETFs are also required

to put in place a prudent haircut policy. For example, where equity securities are posted as collateral, the market value of such equity collateral must be equivalent to at least 120% of the related gross counterparty exposure.

Use of Access Products to Access Restricted Markets

In Hong Kong, in addition to the usual funded and unfunded swap structures typically employed by synthetic ETFs, a number of ETFs utilise access products to provide exposure to the China A-Share market. ETF providers currently use different naming conventions for access products.

An access product can be any of a variety of different derivative instruments (e.g. equity-linked note, low exercise price option (LEPO), warrant, etc.) that is linked to an individual A-Share or an A-Share index. An access product is an obligation of the access product issuer to provide the ETF the economic performance of the underlying A-Share(s) or A-Share index. As is the case with swaps, an access product does not provide any beneficial or equitable entitlement or interest in the relevant A-Shares to which the access product is linked. Essentially, each access product synthetically replicates the performance of the relevant A-share or the underlying index.

Under the access product structure, the ETF transfers investors’ cash to the access product issuers, in exchange for the performance of the underlying index/share(s) (less fees, usually comprised of commissions for the purchase and sale of each access product and maintenance fees). The return from the access product(s) in aggregate delivers the return of the underlying index to the fund. In general, multiple access product issuers are used in building these funds.

Access product issuers are required to post collateral for the benefit of the fund, which is currently held by third party trustees on behalf of the ETF. A securities lending and borrowing arrangement is in place whereby the access products will be lending back to the access product issuer to obtain the collateral. As a provision of the UT code for Hong Kong-domiciled synthetic ETFs, collateral must be topped up on a daily basis to achieve at

Hong Kong Listed ETFs Naming Guidelines

Replication Method	Name of ETF	Stock Short Name
Physical	ABC ETF	ABCETF
Synthetic	CBA ETF* (*This is a synthetic ETF)	X CBAETF

Source: SFC, Morningstar, Inc.

Summary of Naming Conventions for Access Products used by ETF Providers

ETF Provider	Access Product Name	Abbreviation
BOCI-Prudential	A-Share access products	AXPs
CICC	Base Securities	—
Da Cheng	Chinese A-Share linked products	ALPs
iShares	China A-Share Access Products	CAAPs
Ping An	Base Securities	—

Source: ETF Providers, Morningstar, Inc.

least 100% collateralisation, or stated differently, 0% counterparty exposure.

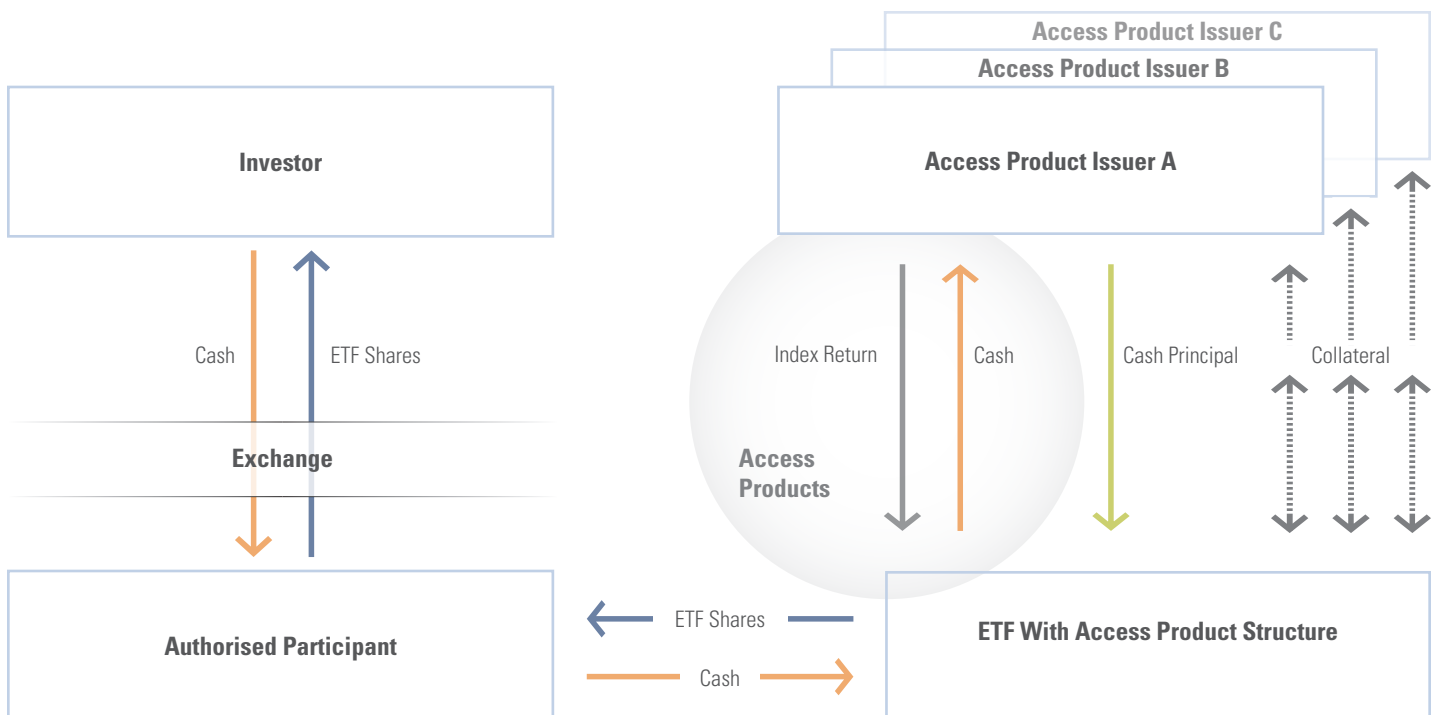
Some ETF providers have policies in place whereby the ETF's manager may ask for additional collateral should circumstances arise that affect the real or perceived creditworthiness of the access product issuer, e.g. a credit downgrade. Under such circumstances, the haircut policy on collateral adopted by the manager at the time will be taken into account.

Stated differently, these ETFs may engage in securities lending—loaning access products back to their issuer—for the sole purpose of obtaining collateral from the access product issuer.

The use of access products exposes the ETF to counterparty risk. As is the case with the multiple swap counterparty model in Europe, engaging multiple counterparties under an access product structure could be beneficial in that it diversifies counterparty risk.

As previously noted, investing in A-Shares is subject to Qualified Foreign Institutional Investors (QFII) quotas and each access product issuer has its own quota limit. Once the quota is reached, the access product issuer may not be able to hedge its position. As such, the issuer may cease to issue additional access products, thereby causing a disruption to the creation and redemption process. The use of multiple access product issuers could potentially reduce the risk of the ETF experiencing such issues.

Using Multiple Access Products to Build a Synthetic ETF - A Simplified Example



History of Synthetic ETFs in Singapore

The first synthetic ETF came to Singapore in October 2006. Promoted by Lyxor, the Lyxor ETF China Enterprise (HSCEI) (P58) is a cross-listed ETF originally launched in France. Since then, cross-listed synthetic ETFs have proliferated in the Singapore market. As of end-March 2012, there were 76 synthetic ETFs listed in Singapore—largely comprised of cross-listed ETFs from db X-trackers and Lyxor—compared to 93 ETFs in total.

Regulatory Framework

All ETFs structured as a unit trust or a trust listed in Singapore are required to comply with the relevant sections of the Companies Act and the Securities and Futures Act (SFA) regarding Collective Investment Schemes (CIS).

The Singapore Stock Exchange requires synthetic ETFs to display the trading name tagged with an 'X', just before the '@' used to mark Specified Investment Products (SIPs). In addition, retail investors can only trade SIPs after they are assessed by the brokerage firms as having the relevant knowledge and experience to understand the risks and features of SIPs.

Access Products Also Used by Singapore Listed ETFs

At present, there is one ETF, namely the United SSE50 China ETF, managed by UOB Asset Management, which uses a type of access product known as participatory notes (P-Notes) to provide exposure to the China A-Share market. The P-Notes are linked to the performance of a composite portfolio comprised of the underlying basket of A-Shares, which is designed to track the underlying index.

Singapore Listed ETFs Naming Guideline

Investment Type	ETF Name	SIP
Physical ETF	ABC ETF	@
Synthetic ETF	CBA ETF	X@

Source: Singapore Exchange, Morningstar, Inc.

Portfolio Composition Example of a Synthetic ETF Using Multiple Access Products

	In dollar amount (\$), with ETF NAV of \$100				Effective Gross Exposure (in %)			
	Access product with exposure to Stock A	Access product with exposure to Stock B	Access product with exposure to Stock C	Access product with exposure to the underlying index	Stock A %	Stock B %	Stock C %	Total %
CP 1	10	10	10	10	14	13	13	40
CP 2	15	5	5	0	15	5	5	25
CP 3	7	9	9	10	11	12	12	35
Total	32	24	24	20	40	30	30	100

Example of Daily Counterparty Exposure of a Synthetic Replication ETF Using Access Products

	Day 1 ¹	Day 2 Before Adjustment	Day 2 After Adjustment	Day 3 Before Adjustment	Day 3 After Adjustment
Index	100	105	105	105	105
Fund NAV	100	105	105	105	105
Collateral Value ²	120	120	— +6 → 126	113.4	— +12.6 → 126
Collateralisation ² %	120	114	120	108	120
Gross counterparty exposure ³ %	100		100		100
Net counterparty exposure ⁴ %	—20		—20		—20
Description	Initial investment of 100, starting level of the index 100, the counterparty delivers collateral of 120	The index rises by 5% but the collateral value remains flat. To maintain the 20% margin, additional collateral of 6 (5 × 120%) is requested		The index remains flat but the collateral value drops by 10%. To maintain the 20% margin, additional collateral of 12.6 is requested	

1. For the purpose of simplicity in this example, we assume that collateral transactions are executed intra-day; 2. Hong Kong domestic synthetic ETFs are required to achieve at least 100% collateralisation, with prudent margins in place (e.g. 120% for equity collateral); 3. Gross counterparty exposure = ETF's exposure to the access product issuer(s) before obtaining collateral as percentage of NAV; 4. Net counterparty exposure = (ETF NAV – Collateral value) / ETF NAV, the ETF's approximate net exposure to the access product issuer(s), after obtaining collateral

Asian Provider Profiles

Please note that the information that we have provided in these profiles was either supplied to us directly by the relevant providers or taken from public sources. As such, we cannot guarantee that it is complete, accurate, or timely. Please refer to ETF prospectuses and providers' Web sites for the latest information. All credit ratings contained within these profiles are valid as of 31 March 2012.

BOCI-Prudential

BOCI-Prudential, a joint venture between BOCI Asset Management (Bank of China being the ultimate parent) and Prudential, rolled out its first synthetic ETF in Hong Kong in July 2007. The firm currently offers 2 synthetic ETFs, out of a total product range of 5, all of which are listed in Hong Kong.

In August 2009 and November 2010, BOCI-Prudential cross-listed one of its synthetic ETFs, W.I.S.E.-CSI 300 China Tracker, in Taiwan and Thailand, respectively, under a feeder fund structure. Subsequently in December 2010, the firm cross-listed the other synthetic ETF, W.I.S.E. SSE 50 China Tracker, in Taiwan.

BOCI-Prudential employs access products (A-Share access products, or as BOCI-Prudential refers to them, AXP), which are derivative instruments in various forms, to gain access to the China A-Share market.

BOCI-Prudential ETFs are domiciled in Hong Kong.

Access Product Issuers

BOCI-Prudential uses multiple AXP issuers. Criteria for selecting AXP issuers include: (1) the entity should be a QFII or belong to a QFII group; (2) it or the guarantor of the relevant AXP issued by it (if any) must have a credit rating acceptable to the manager; and (3) it must be an institution with a minimum paid-up capital of the equivalent of HK\$150m and a member company of a group including a commercial bank supervised by a regulator in a jurisdiction acceptable to the manager. As at the date of appointment of the relevant AXP issuer, it should have an investment grade credit rating.

In aggregate, the two synthetic ETFs use 3 AXP issuers in total including Credit Suisse (rated A+ by S&P), Deutsche Bank (A+), and UBS (A).

Collateral

Collateral held by the ETF should must represent 100% of the ETF's gross total counterparty risk exposure and be marked to market on a daily basis with the aim to ensure that there is never any uncollateralised counterparty ex-

Asian Synthetic ETF Providers

ETF Provider	Parent Entity	Country	Synthetic ETFs	Total ETFs	Total ETF AUM USD Mil
BOCI-Prudential	Bank of China and Prudential	China and United Kingdom	2	5	899
CICC	CICC	China	1	1	1
Da Cheng	Dacheng Fund	China	1	4	243
db X-trackers	Deutsche Bank	Germany	55	55	—
iShares	BlackRock	United States	8	22	7,554
Lyxor	Société Générale	France	28	28	—
Ping An	Ping An Insurance	China	1	4	157
UOB	United Overseas Bank	Singapore	1	1	40
Xie Shares /EIP	Enhanced Investment Products	Hong Kong	7	7	80

Number of ETFs include cross listed ETFs listed outside Asia; AUM includes only Asia domiciled ETFs

Source: ETF Providers and Morningstar. Data as of 31 March 2012. AUM Data from Deutsche Bank



posure. Where collateral taken is in the form of equity securities, the market value of such collateral should represent at least 120% of the related gross counterparty exposure.

The value of collateral and the ETF's investment in the securities of any single issuer, other than government and other public securities, will not in aggregate exceed 10% of the ETF's net asset value. The ETF may accept government and other public securities of the same issue as collateral in an amount up to 30% of the ETF's total net asset value. Furthermore, the ETF may accept government and other public securities as collateral provided that such government and other public securities are selected from at least six different issues.

The ETF will not accept any securities issued by any of the AXP issuer's engaged by the ETF, or any of its group companies as collateral.

Collateral provided to the ETF must be held by the ETF's trustee.

Disclosure

BOCI-Prudential publishes the gross and net exposure to each counterparty on a daily basis and the composition of the collateral and top 10 collateral holdings on a weekly basis on its website (www.boci-pru.com.hk).

BOCI-Prudential also publishes its collateral policy on its website.

Securities Lending

The ETF will not enter into any stock lending transactions except for the purpose of provision of collateral.

Access Product Costs

The AXP issuer charges an execution fee of up to 0.9% on rebalancing purchase and sales of AXP. The AXP issuer also charges a maintenance fee in the range of 0.2%-0.5% per annum of the average daily mark to market value of all AXPs.

These charges are stated in the ETF's prospectus.

China International Capital Corporation (CICC)

CICC rolled out its first and only ETF in Hong Kong in January 2010. It uses synthetic replication.

CICC employs access products (referred to as "Base Securities" by CICC), which are derivative instruments in various forms, to gain access to the China A-Share market.

The CICC ETF is domiciled in Hong Kong.

Access Product Issuers

CICC uses multiple Base Securities issuers. Criteria for selecting Base Securities issuers include: (1) the entity must be a QFII or belong to a QFII group; (2) it must be a financial institution with a minimum paid up capital of equivalent to HK\$15m; (3) a member company of a group (including a bank) which is prudentially supervised in a jurisdiction acceptable to the trustee and the manager; and (4) it must have an S&P credit rating in respect to its senior debt of at least A- , or equivalent.

The ETF currently holds Base Securities from only one Base Securities issuer, RBS (rated A- by S&P) out of the four which CICC has screened which are: UBS (A), Citigroup (A-), RBS (A-) and Nomura Bank International Plc (A-).

Collateral

The manager accepts cash and/or constituent stocks of the Hang Seng Index and/or Hang Seng China Enterprises Index or other Hong Kong stocks listed on The Stock Exchange of Hong Kong which the manager considers acceptable as collateral. However, this may change in light of prevailing market conditions.

Collateral held by the ETF must represent at least 100% of the ETF's gross total counterparty exposure and be maintained, marked to market on a daily basis with a view towards ensuring that there is no uncollateralised counterparty risk exposure; and where collateral taken is in the form of equity securities, such collateral shall be subject to an additional requirement such that the market value of such collateral represents at least 120% of the related gross counterparty risk exposure.

The value of collateral issued by any single issuer may not exceed 10% of the ETF's net asset value.

Collateral will be held in a segregated account opened in the name of the trustee.

In the event that the Base Securities issuer is unable to fulfill its obligations under any of the Base Securities which is subject to the collateral arrangement, the manager may instruct the trustee to exercise its rights over the collateral by liquidating the collateral in order to offset the obligations of the Base Securities issuer.

Disclosure

CICC publishes the gross and net exposure to each counterparty on a daily basis and the composition of the collateral and top 10 collateral holdings on a monthly basis on its website (www.cicc.com.cn).

Securities Lending

The manager may engage in a securities lending programme on behalf of the ETF.

Access Product Costs

The Base Securities issuer charges an execution fee of up to 0.70% on rebalancing-related sales and purchases of Base Securities. The Base Securities issuer also charges a maintenance fee of 1% per annum of the average daily mark-to-market value of all Base Securities.

These charges are stated in the ETF's prospectus.

Da Cheng

Da Cheng rolled out its first and only synthetic ETF in Hong Kong in July 2010, out of a total product range of 4, with the remaining three consisting of 2 physical replication ETFs listed in Hong Kong and 1 physical replication ETF listed in China.

Da Cheng employs access products (which it refers to as "Chinese A-Share Linked Products", or ALPs), which are derivative instruments in various forms, to gain access to

the China A-Share market.

Da Cheng's synthetic ETF is domiciled in Hong Kong.

Access Product Issuers

Da Cheng uses multiple ALP issuers. The manager selects ALP Issuers according to the following criteria: an ALP Issuer must be an institution with a minimum paid up capital of the equivalent of HK\$150m and an S&P credit rating on its senior debt of at least A-, or equivalent, and it must be a member company of a group including a bank prudentially supervised in a jurisdiction reasonably acceptable to the trustee and the manager.

The firm's synthetic ETF currently holds ALPs from only one (Merrill Lynch) of the 3 ALP issuers that it has employed, which are Merrill Lynch (rated A by S&P), Goldman Sachs (A) and Citigroup (A-).

Collateral

Either cash or securities may be posted as collateral on a daily mark-to-market basis to cover the exposure of the ETF to an ALP issuer.

Securities taken as collateral will be transferred to the trustee. Such a collection of securities must be comprised of at least 15 different stocks listed on the Stock Exchange of Hong Kong that are components of either the Hang Seng Index or the Hang Seng China Enterprises Index, with no single stock provided as collateral representing more than 10% of the net asset value of the ETF. In addition, the manager has the sole discretion to accept shares of any other stocks primarily listed in Hong Kong (but components of the S&P 500 Index, the Straits Times Index, the TOPIX Index and the Nikkei 225 may also be acceptable) as collateral.

Collateral held by the ETF must represent at least 100% of the ETF's gross total counterparty risk exposure to all ALP issuers, and be marked-to-market on a daily basis with a view towards ensuring that there is no uncollateralised counterparty risk exposure.

Equity collateral shall be subject to an additional requirement such that the market value of such collateral represents at least 120% of the related gross counterparty risk exposure.

The value of collateral issued by any single issuer may not exceed 10% of the ETF's net asset value.

In the event of insolvency or an event of default with respect to the ALP issuer, the trustee will keep the collateral for the account of the ETF.

Disclosure

Da Cheng publishes the gross and net exposure to each counterparty on a daily basis and the composition of the collateral and top 10 collateral holdings on a monthly basis on its website (www.dcfund.com.hk).

The collateral management policy of the ETF, as amended from time to time, is also published on the firm's website.

Securities Lending

The trustee may, at the request of the manager, engage in securities lending, in respect of any securities owned by the ETF.

Access Product Costs

The ALP issuer charges a 0.3% commission on the sale and purchase of each ALP. The ALP issuer also charges a maintenance charge of 0.4% per annum of the average daily mark-to-market value of the ALPs by the relevant ALP.

These charges are stated in the ETF's prospectus.

db X-trackers

db X-trackers, the ETF provider of Deutsche Bank, first listed its ETFs in Singapore in February 2009 and the first in Hong Kong in June 2009. These were all cross-listings of European-domiciled ETFs. The firm's local listings currently amount to 47 in Singapore and 30 in Hong Kong, all of which are synthetic ETFs.

Given that these are cross-listed ETFs, their swap policies and operational details are identical to those described previously in the section "European Provider Profiles" for db X-trackers.

iShares

iShares, BlackRock's ETP business, was the earliest adopter of synthetic replication in Asia with the first synthetic ETF rolled out in Hong Kong in November 2004.

The firm currently offers 8 synthetic ETFs in Hong Kong, all of which offer exposure to the China A-Share market, out of a total range of 14 ETFs in Hong Kong. iShares also has 8 locally domiciled and cross-listed physical replication ETFs listed in Singapore.

iShares employs access products (referred to as China A-Share Access Products, or CAAPs, by iShares), which are derivative instruments, to gain access to the China A-Share market.

All iShares' synthetic ETFs listed in Asia are domiciled in Hong Kong.

Access Product Issuers

Criteria for selecting CAAP issuers include: (1) the entity must have a paid up capital of over HK\$150m; (2) have an S&P credit rating of at least A- or equivalent; (3) be independent of the manager; and (4) be a member company of a group including a bank prudentially supervised in a jurisdiction reasonably acceptable to the trustee and the manager.

iShares uses multiple CAAP issuers. The exposure to various CAAPs issuers is dependent on their CAAP issuance capabilities.

There are currently 12 CAAP issuers in iShares' stable (not all CAAP issuers are used by all iShares ETFs), including Barclays (rated A+ by S&P), Citigroup (A-), CLSA (A), Credit Suisse (A+), Goldman Sachs (A), HSBC (AA-), ING (A+), JP Morgan (A), Merrill Lynch (A-), Morgan Stanley (A+), RBS (A-) and UBS (A).

Collateral

Full collateralisation of all CAAP issuer exposure is required.

The securities which can be used as collateral for the CAAPs include developed countries' government bonds and developed market equities, to which margins are applied: at least 20% for equity collateral and 3% for bond collateral. These margins result in over-collateralisation. There are explicit criteria for liquidity, quality and diversification for equity collateral: (1) maximum 40% of the 30-day average daily trading volume per security per CAAP issuer; (2) single security maximum weight of 10% measured against the total collateral pool per CAAP issuer; (3) maximum weight to each security issuer as measured against the ETF's collateral pool (4% for iShares FTSE A50 China Index ETF; 10% for other A-Share ETFs); and (4) equity securities must be listed on major developed markets and constituents of approved indices.

There are also explicit liquidity, quality and diversification criteria for bond collateral: (1) USD 25m to USD 250m maximum value per security depending on country of issue; and (2) issuers must be from major developed countries with a minimum credit rating of AA-.

Collateral will be held in a segregated account opened in the name of the trustee.

Disclosure

iShares publishes the gross and net exposure to each counterparty on a daily basis and the composition of the collateral and top 10 collateral holdings on a monthly basis on its website (www.ishares.com.hk).

iShares also publishes its collateral policy (as revised from time to time) on its website.

Securities Lending

The ETF may enter into stock lending transactions for the purpose of provision of collateral.

Access Product Costs

The CAAP issuer charges a 0.30% commission on each purchase and sale of each CAAP.

Each CAAP issuer shall also be entitled to deduct a CAAP maintenance charge in the form of distributions payable under the CAAP equal to 0.30% p.a. of the daily mark-to-market value of the CAAPs issued by the relevant CAAP issuer.

These charges are stated in the ETFs' prospectuses.

Lyxor

Lyxor was the first-mover in the synthetic replication sphere in Singapore. The fully-owned subsidiary of Société Générale listed its first swap-based ETFs in Singapore in October 2006. The firm subsequently paraded into Hong Kong in April 2007, but decided to de-list all 12 of its Hong Kong listed ETFs in March 2012.

Lyxor currently has 28 ETFs listed in Singapore, all of which are synthetic ETFs.

Given that these are cross-listed ETFs, their swap policies and operational details are identical to those described previously in the section "European Provider Profiles" for Lyxor.

Ping An

Ping An launched its first and only synthetic ETF in May 2010, out of a total product range of 4 ETFs in the region, all of which are listed in Hong Kong, with the remaining 3 being physical ETFs which were listed in February 2012. Ping An employs access products (referred to as "Base Securities" by Ping An), which are derivative instruments in various forms, to gain access to the China A-Share market.

All Ping An ETFs are domiciled in Hong Kong.

Access Product Issuers

Ping An uses multiple access product counterparties for its synthetic ETF. Currently only banks or other financial institutions with an S&P rating of at least A-, or an equivalent rating from Moody's or Fitch, are considered to provide access products.

Current counterparties include UBS (rated A by S&P) and Citigroup (A-).

Collateral

Current collateral includes Hong Kong-listed equities and cash.

Collateral levels must be at least 100% of the fund's net asset value and haircuts are applied on various asset classes (e.g. equity collateral must represent at least 120% of the related gross counterparty risk exposure) as required by local regulation.

The degree of correlation between the collateral basket and the underlying index is taken into consideration by the manager.

Disclosure

Ping An publishes the gross exposure and collateral exposure (before and after haircuts) to each counterparty on a daily basis and the composition of the collateral and top 10 collateral holdings on a monthly basis on its website (<http://asset.pingan.com.hk>).

Securities Lending

Ping An ETFs may enter into stock lending transactions for the purpose of provision of collateral.

Access Product Costs

The base securities issuer charges an additional commission of 0.30-0.40% on the sale and purchase of each base security. The base securities issuer also charges a maintenance fee of 0.30-0.40% per annum of the average daily mark-to-market value of all base securities. These charges are stated in the ETF's prospectus.

UOBAM

UOBAM launched its first and only synthetic ETF in Singapore in November 2009.

UOBAM employs a type of access product known as participatory notes (P-Notes) which are derivative instruments linked to the performance of a composite portfolio, which is designed to closely track the ETF's underlying index.

The ETF is domiciled in Singapore.

Access Product Issuers

The ETF purchases P-Notes from a single issuer, namely Rabobank (rated Aaa by Moody's [negative watch], AA by S&P, and AA by Fitch).

The manager intends to adhere from the outset to requiring a minimum long-term rating on P-Note issuers of A from Fitch, A from Moody's or A from S&P. In the event of a rating downgrade of the P-Notes issuer below the applicable minimum long-term rating (BB+ from S&P, C from Fitch, or C from Moody's) prescribed by the Code (Code on CIS issued by MAS) the manager will take suitable action to comply with the Code.

Collateral

Acceptable forms of collateral prescribed by the Code include either money market instruments or government bonds that have a long-term rating of AAA from Fitch, Aaa from Moody's or AAA from S&P, or cash. Currently, collateral is largely comprised of Singapore government treasury bills.

The value of the collateral will be determined daily to ensure the counterparty exposure to Rabobank (net of collateral) is not more than 10% of the net asset value of the ETF. Rabobank will top up the collateral when required.

The collateral, which can be fully enforced by the trustee at any time, will be placed in a trust or custodial account in Hong Kong charged and assigned by Rabobank to the trustee.

Disclosure

UOBAM publishes the information on the fund's collateral on a monthly basis on its website (www.uobam.com.sg).

Securities Lending

The ETF currently does not engage in securities lending.

Access Products Costs

The P-Notes issuer charges a 0.40% transaction fee on each P-Notes transaction. There is also a maintenance fee of 0.30% p.a. of the net asset value of the composite portfolio, and a 0.20%-1% transaction fee for the posting of collateral. These charges are disclosed in the ETF's prospectus.

P-Notes have a 3-year term.

Xie Shares / Enhanced Investment Products

Xie Shares is the ETF brand of Enhanced Investment Products (EIP); EIP launched its range of synthetic ETFs in February 2012. The firm currently offers 7 ETFs, all of which are swap-based.

Xie Shares ETFs employ the un-funded swap model. Each ETF buys a basket of non-index securities and enters into swap agreements with swap counterparties which pay the relevant index performance (adjusted for the swap fees) in exchange for the performance of the ETF's basket of non-index securities. All Xie Shares ETFs are domiciled in Hong Kong.

Swap Counterparties

Xie Shares ETFs enter into swap agreements with multiple counterparties.

The swap counterparty selection criteria shall be, at a minimum, as follows: (1) it must have a paid-up capital of the equivalent of at least HK\$150m; (2) it or its guarantor must be a substantial financial institution (as defined under the UT Code) subject to an on-going prudential and regulatory supervision; and (3) it or its guarantor must have a long-term debt credit rating of at least "A-" from S&P or an equivalent at all times.

Xie Shares currently works with 3 swap counterparties: Citigroup (rated A- by S&P), JP Morgan (A+) and RBS (A).

EIP does not determine a target percentage gross exposure among the counterparties. The allocation is determined by the natural inflows and outflows of cash into and out of each ETF. Both EIP as the investment manager and the trustee are monitoring the gross and net counterparty exposure on a daily basis.

EIP will manage each ETF such that its aggregate net counterparty exposure to all swap counterparties is no more than 5% of the ETF's net asset value as at each valuation point. The movement of the relevant index and the movement of the basket of non-index securities will be marked to market daily, which will determine whether the relevant ETF receives or pays cash on a daily basis. Any net cash receivable by such ETF represents that such ETF's net counterparty exposure to the relevant swap counterparty has exceeded zero on that particular trading day. Such swap counterparty will be required to make a cash payment on the next trading day to the ETF to maintain such ETF's aggregate net counterparty exposure to all swap counterparties at no more than 5% of net asset value as at each valuation point.

EIP has put in place business contingency plans which will be activated whenever there is a credit event (as described in the prospectus) or whenever EIP assess that the risk of a credit event occurring is materially high.

Substitute Basket

Xie Shares ETF invests in a basket (referred to as the "Invested Assets" by EIP) of at least 30 different securities (equity securities and bonds) and cash or cash equivalents. The securities held by the ETF may or may not be constituents of the relevant index. It is expected that this portfolio will be comprised predominantly of equities.

Equity securities will be listed stocks of blue chip companies, each of which (1) has relatively stable earnings; (2) is a constituent of the FTSE All World Index or the MSCI All Country World Index; and (3) has a total market capitalisation of at least US 4bn. The ETF's holding of each

such listed stock shall not exceed 50% of such stock's average daily trading volume over the last 30 trading days and the average market capitalisation of all companies, the equity stocks of which are included in the ETF's portfolio of Invested Assets, shall be at a level of not less than US 15bn.

Bonds will be issued by issuers which have a credit rating of at least "A" from S&P or equivalent.

EIP will maintain each ETF's portfolio of invested assets to a value as close to 100% of the net asset value of the ETF as reasonably practicable, subject always to a minimum limit of 95% of the net asset value at each valuation point.

The Invested Assets are currently being rebalanced at least on a monthly basis.

Swap Reset Policy

Swaps are marked-to-market daily with daily cash movement, between individual swap counterparty and each ETF so that the aggregate net counterparty exposure of each ETF to each swap counterparty will not exceed 5% of net asset value.

Disclosure

Xie Shares publishes the gross and net exposure to each counterparty and the composition and breakdown of the Invested Assets on a daily basis on its website (www.xieshares.com).

Securities Lending

Xie Shares' synthetic ETFs currently do not engage in securities lending.

Swap Costs

Swaps for XIE Shares ETFs generally have a 1-year term. Swaps will be reviewed and renegotiated (if necessary) at least on an annual basis.

Synthetic ETFs in Canada

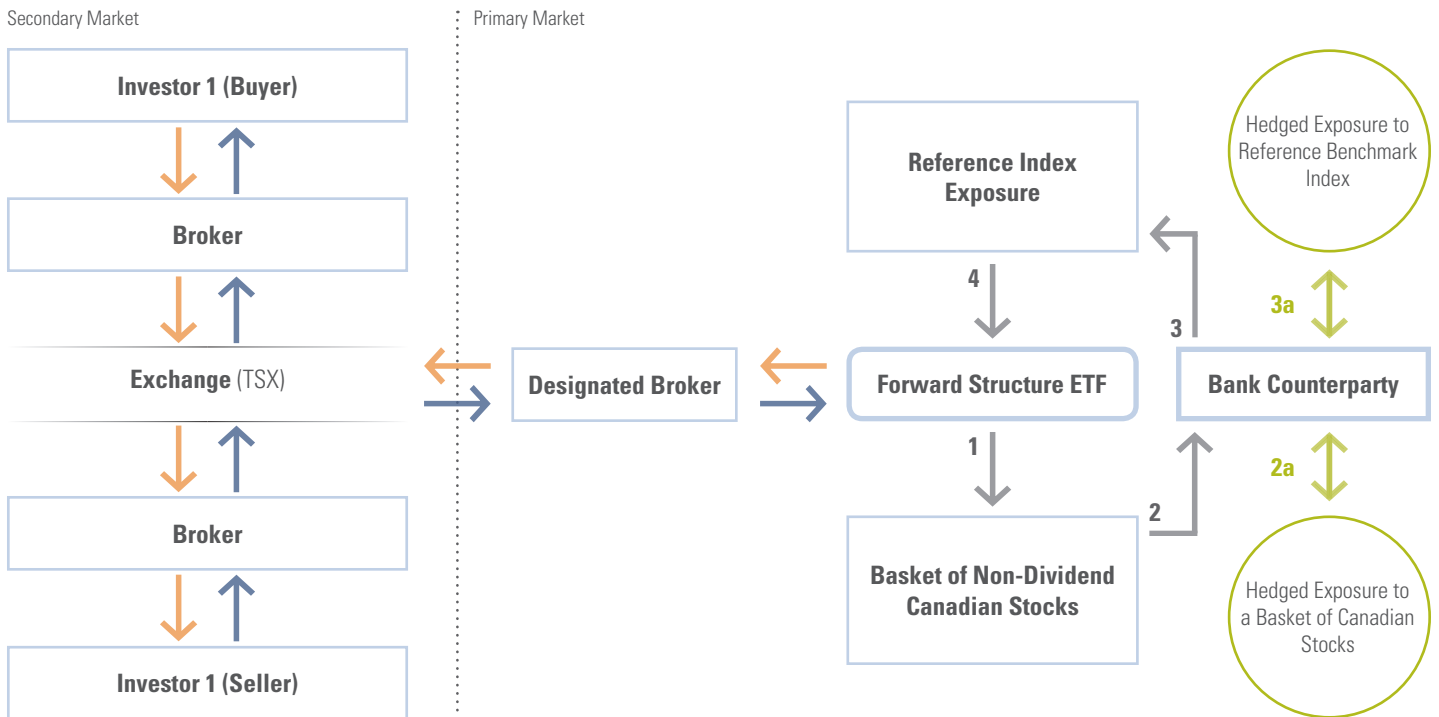
History of Synthetic ETFs in Canada

The relatively short history of synthetic ETFs in Canada began in January 2007 with the launch of leveraged and inverse ETFs employing a forward contract structure by Horizons BetaPro. The forward structure allows the ETF's transactions to be treated as capital gains/losses, as opposed to the fully taxable income treatment that would be associated with directly obtaining leverage and/or investing in futures contracts or other derivative instruments under existing securities laws in Canada. This is because these forward structure ETFs' assets consist of Canadian listed non-dividend paying stocks (the return on

which is then swapped for the return of the reference benchmark index).

In January of 2008, the former Claymore brand (now iShares) launched a global dividend ETF, which utilised the same forward structure as the Horizons BetaPro leveraged funds. The former Claymore brand (now iShares) went on to offer five more forward structure ETFs, offering taxable fixed income distributions which are classified as capital gains. In April 2010, Horizons BetaPro introduced Canada's first long/short commodity spread ETFs that also utilise the forward structure. In September 2010, Horizons also introduced three (non-leveraged) synthetic ETFs that employ total return swaps that are collateralised by cash. Finally, in December 2010 Horizons introduced a forward structure ETF that tracks the S&P 500 VIX Short-Term Futures Index.

Example of the Structure of a Canadian Synthetic ETF based on Forward Contract Agreements



1. The ETF invests in a basket of non-dividend paying Canadian stocks 2. Pursuant the forward agreement, the ETF sells the basket of Canadian shares to the bank counterparty 2a. The bank counterparty can hedge to maintain no net exposure to the basket of Canadian stocks 3. Pursuant the forward agreement, the bank counterparty purchases the basket of Canadian stocks from the ETF for a price payable based on +/- 200% of the daily performance of the referenced underlying benchmark 3a. The bank counterparty can hedge to maintain no net exposure to the referenced underlying benchmark 4. The ETF receives (and delivers to unitholders) +/- 200% of the daily performance of the referenced underlying benchmark
 Source: Morningstar, Inc.

Regulatory Framework

By using a forward contract that is backed primarily by Canadian non-dividend paying stocks, ETFs utilising the forward structure are able to maintain their status as a “mutual fund trust” under the Income Tax Act (Canada) and provide unitholders with a more favourable taxation profile. These ETFs’ election under subsection 39(4) of the Income Tax Act allows them to have their transactions in Canadian securities treated as capital transactions, as opposed to income gains or losses. The term “Canadian securities” is defined in subsection 39(6) of the Income Tax Act as a security that is a share of the capital stock of a corporation resident in Canada. Non-dividend paying stocks are selected for the “common share portfolio” in order to maintain simplicity and avoid the tax consequences associated with receiving dividend income into the portfolio.

Canadian Securities laws limit exposure to any single counterparty incurred via a derivative transaction to 10% of total net assets. Furthermore, those firms employing the forward structure are required to terminate the equity forward exposure if the counterparty’s credit rating is downgraded below a level of single A by Dominion Bond Rating Service.

There is a regulatory requirement which states that Counterparties must have a credit rating no lower than (a) Dominion Bond Rating Service Limited “R-1” rating for Commercial Paper/Short-Term Debt and “A” for Long-Term Debt; (b) Fitch Ratings “F1” rating for Commercial Paper/Short-Term Debt and “A” for Long-Term Debt; (c) Moody’s Investors Service “P-1” rating for Commercial Paper/Short-Term Debt and “A2” for Long-Term Debt; or (d) Standard & Poor’s “A-1” rating for Commercial Paper/Short-Term Debt and “A” for Long-Term Debt.

Canadian Provider Profiles

Please note that the information that we have provided in these profiles was either supplied to us directly by the relevant providers or taken from public sources. As such, we cannot guarantee that it is complete, accurate, or timely. Please refer to ETF prospectuses and providers' Web sites for the latest information. All credit ratings contained within these profiles are valid as of 30 April 2012.

Horizons BetaPro

Horizons, a member of the South Korea-based Mirae Asset Global Investment Group, first launched forward structure leveraged and inverse ETFs in January 2007. The firm currently manages 31 leveraged ETFs and 10 inverse ETFs, as of March 31, 2012.

Horizons also offers four long/short commodity ETFs and an S&P Volatility tracking ETF.

In September 2010, Horizons introduced three (non-leveraged) synthetic ETFs that utilise total return swaps.

Swap Counterparty

The firm's main counterparty is National Bank Financial of Canada. Its long term credit is rated Aa1 by Moody's, A+ by S&P and A by Fitch.

In the event of default the equity forward agreement would be unwound. The fund still owns the substitute basket and its NAV will be equal to the value of the equity basket less any loss on the forward agreement.

The custodian is State Street Trust Company Canada. The assets are held in a segregated account at the counterparty outside of their balance sheet.

Substitute Basket

Under the Forward Documents, each ETF will restrict its investments to widely traded common shares of non-dividend paying Canadian public companies that are each a "Canadian security" for the purposes of subsection 39(6) of the Tax Act.

As part of the firm's internal risk control procedures, counterparty risk exposure is monitored continuously on a daily basis.

The ETF will seek to limit any outstanding exposure to a counterparty that it deems to have a negative or deteriorating credit profile.

Each ETF will be entitled to pre-settle the Forward Contracts in whole or in part from time to time as needed to fund Unit redemptions and market repurchases of Units, pay administrative expenses, meet other liquidity needs and such other purposes as that ETF may determine.

Because current securities laws limit exposure to any single counterparty to 10% of total net assets, in the event of a default by the counterparty, the investor would still receive 90% of their claim on the ETF's net asset value, less any intra-day reduction in the value of collateral. Investor assets are held in the diversified basket of non-dividend paying stocks.

Horizons BetaPro Total Return Swap ETFs do not physically hold any securities, but rather get their index exposure through a total return swap (TRS). When a unithold-

Canadian Synthetic ETF Providers

ETF Provider	Parent Entity	Country	Synthetic ETFs	Total ETFs	Total ETF AUM USD Mil
Horizons BetaPro	Mirae Asset Global Investment Group	South Korea	48 ¹	111	3,366.50
iShares	BlackRock	United States	12 ²	120 ³	39,228.70

1. Including 27 "Advisor Class Shares" 2. Including 6 "Advisor Class Shares" 3. Including 32 "Advisor Class Shares". Source: ETF Providers and Morningstar. Data as of 31 March 2012

er invests in a Horizons TRS ETF, the principal investment is held as cash collateral in a custodial account. The interest income earned on the cash goes to the ETF's bank counterparty, who in exchange delivers to the ETF the return on the index or other benchmark, as stated in the ETF's investment objective.

Disclosure

Horizons does not disclose the composition of its funds' substitute baskets.

Securities Lending

Horizons BetaPro's synthetic forward structure can and do engage in securities lending.

Swap Costs

Horizons discloses the forward and swap fees for its entire synthetic ETF lineup within the funds' prospectuses.

Note that the forward expense or swap fee is levied in addition to the management fee.

iShares

iShares' first synthetic ETF was launched in January 2008—the iShares Global Monthly Advantaged Dividend Index Fund (formerly known as the Claymore Global Monthly Advantaged Dividend ETF)

This ETF, along with five other synthetic ETFs, were acquired as part of BlackRock Asset Management Canada Limited's acquisition of Claymore Investments, Inc. Canada—a deal which closed on 7 March 2012.

In total, iShares now offers six synthetic ETFs, all of which use the equity forward structure.

Synthetic replication is utilised in order to reclassify income as capital gains for more favourable tax treatment.

Swap Counterparty

Only one counterparty is used per fund, either Toronto Dominion Bank or National Bank of Canada. Toronto Dominion Bank's long term credit is rated Aaa by Moody's,

AA- by S&P, and AA- by Fitch. National Bank of Canada's long term credit is rated Aa2 by Moody's, A by S&P, and A+ by Fitch.

iShares evaluates the pricing offered by each counterparty.

In the event of default the equity forward agreement would be unwound. The fund would still own the substitute basket and its NAV will be equal to the value of the equity basket less any loss on the forward agreement.

The custodian is CIBC Mellon Trust Company. The assets are held in a segregated account at the counterparty off their balance sheet.

Substitute Basket

The ETF will only invest in common shares of non-dividend paying Canadian public companies that classify as "Canadian securities" for purpose of the Tax Act.

The correlation between the substitute basket and the fund's benchmark is considered.

iShares has set concentration limits at both the issuer and industry sector level.

As part of the firm's internal risk control procedures, counterparty exposure is monitored on a daily basis.

Since Canadian Securities laws limit exposure to any single counterparty to 10% of total net assets, if this threshold is exceeded then the fund will reset the exposure.

Disclosure

The substitute basket is disclosed on a daily basis on the provider's website.

As part of the integration process of the legacy Claymore funds iShares is building a section on its website where it will clearly show all of the fees and expenses associated with the structure.

Securities Lending

iShares' synthetic ETFs currently do not engage in securities lending, but they have the capability to do so.

Swap Costs

The firm's forward structure ETFs pay to the counterparty an amount under a forward, calculated daily and payable quarterly in arrears, of approximately 0.45% per annum of the forward amount plus an amount in respect of hedging costs in connection with the common share portfolio. Given the funds' current size the actual amounts are 0.45% or less. There are no additional swap-related fees for creations/redemptions.

Synthetic ETFs in Australia

History of Synthetic ETFs in Australia

The brief history of synthetic ETFs within Australia centers on the country's lone provider of swap-based ETFs, BetaShares. BetaShares first launched two synthetic funds in December of 2010. These funds were converted to full physical replication in October of 2011 in the face of increased regulatory scrutiny of synthetic ETFs. However, BetaShares subsequently launched 3 new synthetic ETFs in November and December 2011 which track commodity benchmarks. After having abandoned synthetic replication earlier in the year, BetaShares opted to utilize the replication method for these new funds as physical replication of the underlying exposures (crude oil, agricultural commodities and a diversified commodities basket) is not possible. In addition to its new swap-based lineup, BetaShares runs 7 ETFs constructed using physical replication as of April 2012.

Regulatory Framework

In November 2010 the Australian Securities & Investments Commission (ASIC) introduced measures to address the risks it saw within synthetic ETFs. Specifically ASIC's guidelines stipulated that:

- ▶ Synthetic ETFs have to use the word "synthetic" in their name.
- ▶ Swap counterparties have to be entities 'of substance' such as an ADI [Authorised Deposit-taking Institution] or its foreign equivalent, or an entity with an irrevocable guarantee from an ADI or ADI equivalent".
- ▶ The provider of the synthetic ETF is required to hold "substantial" collateral for its swap agreements

- ▶ Furthermore, this collateral is required to be liquid and "consistent with the investment objective for the ETF".
- ▶ The ETF's counterparty exposure "should not normally exceed 10% of the ETF value, and if temporarily exceeded, the counterparty should immediately pay up to reduce this exposure".
- ▶ And lastly that "investments in these types of products should be non-recourse".

ASIC's guidance is similar in many ways to the UCITS guidelines pertaining to European-domiciled ETFs. Most notably, ASIC also stipulates that synthetic ETFs' level of counterparty exposure should not exceed 10% of the fund's net asset value. One feature of ASIC's guidelines that is distinct from the relevant European regulations is the requirement to include the word "synthetic" in the ETFs' names. This is more in line with current conventions in Asian markets and something that is currently under consideration as part of ESMA's review of UCITS ETFs in Europe.

Australian Provider Profile

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BetaShares

BetaShares first launched two synthetic funds in December of 2010. These funds were converted to full physical replication in October of 2011.

BetaShares launched 3 commodity funds in November and December 2011 which utilise synthetic replication. Synthetic replication is utilised as physical replication of the underlying exposures (crude oil, agriculture and a diversified commodities basket) is not possible.

In addition, as of April 2012, BetaShares runs 7 ETFs constructed using physical replication.

Swap Counterparty

Credit Suisse International is the main swap provider for the BetaShares Commodity ETFs. Its long term credit is rated Aa1 by Moody's, A+ by S&P and A by Fitch.

BetaShares will only select swap counterparties that are highly reputable, have good financial standing and have a long term investment grade credit rating from one of the major credit rating agencies. In addition, the

swap counterparty must be subject to prudential supervision in Australia as an Australian "Authorised Deposit-taking Institution", or elsewhere on a substantially equivalent basis (or a subsidiary of such a prudentially regulated institution where the institution and its group are prudentially regulated on a consolidated basis). BetaShares may also select an entity as an Approved Financial Institution if the entity's liability under any swap agreement is guaranteed by an institution of the kind described above.

Substitute Basket

At present all BetaShares synthetic ETFs hold cash in segregated accounts with third party custodian RBC Dexia.

Cash will be invested in overnight "at call" deposit accounts, term deposits, cash management trusts or short-term money market instruments such as bank accepted bills, certificates of deposit, commercial paper, government or semi-government securities or floating rate notes. Minimum liquidity and credit rating criteria are applied in selecting such investments for a fund, including the ability to liquidate investments on very short notice (generally no more than three business days) and the requirement that investments carry a minimum "investment grade" rating from one of the major credit rating agencies.

As the Swap can result, from time to time, in amounts payable by the Counterparty to the ETF, there may be counterparty risk associated with the Swap. On a daily basis, BetaShares will calculate the value of Commodities Index Swap. This is represented by the mark-to-market valuation of the Swap. Independently, the ETF's Fund Administrator performs the same calculation for the purposes of calculating the ETF's Net Asset Value. Any dis-

Australian Synthetic ETF Provider

ETF Provider	Parent Entity	Country	Synthetic ETFs	Total ETFs	Total ETF AUM USD Mil
BetaShares	BetaShares Capital Ltd	Australia	3	10	3,366.50

Source: ETF Providers and Morningstar. Data as of March 31, 2012

crepancies between these two calculations are resolved on the day between these two parties. In addition, both BetaShares and the Fund Administrator will reconcile their swap valuations to the Counterparty's own swap valuation reports. This process occurs on the morning after valuation day.

In order to ensure that the ETF and Counterparty's credit exposure is limited to an acceptable level, BetaShares and the Counterparty have entered into a Credit Support Annex ("CSA"). This agreement regulates the credit support required under the Swap Agreement. As a matter of broad policy, BetaShares Commodity ETFs are managed with the objective of limiting all counterparty exposure to 0% (the "threshold"). If the threshold has been breached, the terms of the CSA state that the party owing under the Swap will have to transfer eligible collateral to the other party. The transfer amount is subject to a minimum transfer amount and rounding.

Eligible collateral consists of cash in Australian Dollars. The transfer of such cash will follow such an agreement of exposure value to be collateralised and where the ETF receives collateral, this will be held in the ETF's custody account.

Swap Reset Policy

The ASX stipulates that exposure to a single counterparty via a derivative instrument mustn't exceed 10% of a fund's net asset value (NAV). BetaShares has set 5% as its maximum allowable threshold for the Commodity ETF range, though in practice the company has the objective of managing this level to 0%.

Disclosure

BetaShares does not provide regular disclosure of the composition of its synthetic funds' asset baskets as they consist entirely of cash.

Securities Lending

BetaShares ETFs don't engage in securities lending.

Swap Costs

The returns of a fund will reflect allowances that accrue to the swap counterparty for index tracking management and for certain costs (including foreign currency hedging) that the fund is not required to incur directly due to use of the swap. These amounts may vary over time and may differ between swap counterparties. BetaShares estimates that such amounts will equate to between approximately 0.5% and 0.8% per annum of the net asset value of the fund. There are no additional swap costs for creations/redemptions.

Regulatory Timeline

Date	Organisation	Action
Aug 2009	SEC & FINRA (US)	Issue joint investor alert on inverse and leveraged ETFs
Mar 2010	SEC (US)	Announces review of use of derivatives by funds. New launches of synthetic ETFs on hold until its completion.
Nov 2010	SFC (HK)	Introduces new measures to raise investors' awareness of synthetic ETFs
Jan 2011	FSA (UK)	Warns that leveraged ETFs may not be suitable for retail investors
Mar 2011	FSA (UK)	Warns on potential conflict of interests in the creation process of "complex" ETFs
Mar 2011	RBA (AU)	Warns on increased complexity of ETF structures
Apr 2011	G20 FSB	Publishes note on "Potential financial stability risks arising from recent trends in the ETF market" (e.g. complexity, opacity, market liquidity)
Apr 2011	IMF	Financial Stability Report (Annex 1.7) discusses risks affecting the ETF market (e.g. Increased use of derivatives, collateral quality, liquidity)
Apr 2011	BIS	Publishes working paper (No 343) on "Market structures and systemic risks of ETFs" (e.g. regulatory arbitrage, mismatched incentives, systemic risks)
Jun 2011	BoE FPC (UK)	Warns on increasing complexity and opacity of ETF structures
Jun 2011	FSA (UK)	Raises concerns over the marketing of "complex" ETFs
Jul 2011	SFO (UK)	Begins fact-finding mission into ETF market
Jul 2011	ESMA (EU)	Publishes first consultation paper on European ETF market guidelines
Aug 2011	ASIC (AU)	Warns on complexity and risks of ETFs
Sep 2011	SFC (HK)	Amends collateral requirement for synthetic ETFs
Sep 2011	ESRB (EU)	Recommends ESMA to consider possibility of withdrawing Ucits label from "complex and opaque" ETFs
Oct 2011	EU Commission	Warns that upcoming Ucits V might contain tighter rules regarding use of derivatives in ETFs
Oct 2011	US Senate	Conducts hearing on ETF market
Jan 2012	SFC (HK)	Approves sale of new batch of synthetic ETFs
Jan 2012	ESMA (EU)	Publishes second consultation paper on European ETF market guidelines
Mar 2012	IOSCO	Publishes consultation paper on best practice standards for the global ETF industry
Mar 2012	EU Commission	Cites ETFs that provide credit or are leverage as "potential shadow banking entities"
Mar 2012	FINRA (US)	Confirms review of issues affecting the ETP market in the wake of the CS Velocity Shares Daily 2x VIX Short-Term ETN trading event
mid 2012 (exp)	ESMA (EU)	Publication of European ETF market guidelines

ASIC Australia Securities and Investments Commission
BIS Bank of International Settlements
BoE FPC Bank of England's Financial Policy Committee
ESMA European Securities and Markets Authority
ESRB European Systemic Risk Board
FINRA Financial Industry Regulatory Authority
FSA UK Financial Services Authority

G20 FSB G20 Financial Stability Board
IMF International Monetary Fund
IOSCO International Organisation of Securities Commission
RBA Reserve Bank of Australia
SEC Securities and Exchanges Commission
SFC Hong Kong Securities and Futures Commission
SFO UK Serious Fraud Office

Comparison of Synthetic ETF Structures in Europe

ETF providers	Swap model	Swap counterparty(ies)	Minimum Level of Collateralisation ¹	Maximum Net Counterparty Exposure ¹ (% fund NAV)	Substitute Basket/Collateral	Securities lending ²
Amundi	Un-funded	Single counterparty: Société Générale for fixed income ETFs and Crédit Agricole for all other ETFs	100%	0%	STOXX Europe 600 for equity ETFs and/or stocks of the underlying index. Investment grade bonds from OECD countries for fixed income and commodity ETFs	No
ComStage	Un-funded	Single counterparty: Commerzbank	100%	0%	European large cap equities, usually from the EURO STOXX 50, DAX or STOXX Europe Large 200 indices	Yes
Credit Suisse	Un-funded	Single counterparty: Credit Suisse	100%	0%	European large cap equities	No
db X-trackers	Un-funded for fixed income, CAC 40, EURO STOXX 50, MSCI World, DAX and Shariah ETFs Funded for all other ETFs	Single counterparty: Deutsche Bank	95% 107.50%–120%*	5% 0%	Sovereign and investment grade bonds for fixed income ETFs. Sovereign and investment grade bonds and OECD country equities for all other ETFs	No
EasyETF	Un-funded	Single/multiple counterparties: BNP Paribas, Goldman Sachs, Société Générale and Merrill Lynch	90% for equity ETFs 100% for fixed income and commodity ETFs	10% 0%	Eurozone large cap stocks 3 month US T-bills (USD or EUR)	No
ETFlab	Un-funded	Single counterparty: DekaBank	100%	0%	Eurozone large cap stocks	No
ETF Securities	Funded + un-funded with repo agreement	Multiple counterparties: Citibank, BofA Merrill Lynch, Rabobank and Barclays Capital	97.50%	2.50%	Developed market equities and various types of bonds	No
iShares	Funded	Multiple counterparties: UBS, Credit Suisse, RBS	100%–120%*	0%	G10 government bonds and developed market equities	No
Lyxor	Un-funded	Single counterparty: Société Générale	100%	0%	OECD country equities (predominantly European) for equity and commodity ETFs. European government and	No
Ossiam	Un-funded	Single/multiple counterparties: Natixis, BNP Paribas and Morgan Stanley	93%	7%	OECD country equities and stocks of the underlying index	No
PowerShares	Un-funded	Single counterparty: Morgan Stanley	97%	3%	Cash and cash equivalent	No

Comparison of Synthetic ETF Structures in Europe

ETF providers	Swap model	Swap counterparty(ies)	Minimum Level of Collateralisation ¹	Maximum Net Counterparty Exposure ¹ (% fund NAV)	Substitute Basket/Collateral	Securities lending ²
RBS Market Access	Un-funded ³	Single counterparty: The Royal Bank of Scotland	93%	7%	Large cap equities from Western European countries, the US, Japan, Australia and Canada	No
Source	Un-funded	Multiple counterparties: Morgan Stanley, Goldman Sachs, JP Morgan, Nomura and BofA Merrill Lynch	95.50%	4.50%	Wide range of listed equities	No
SpotR	Funded for un-leveraged ETFs Un-funded + funded for leveraged ETFs	Single counterparty: SEB	105%	0%	Stocks listed on main global indices and short-term government bonds and bills issued by Germany, Sweden, UK and US	No
UBS	Funded Funded + un-funded ⁴	Single counterparty: UBS	105%	0%	Global large cap stocks, G10 government bonds and supranational bonds	No
XACT ETF	Funded	Single counterparty: Handelsbanken	100.50%–125%*	0%	Government and covered bonds for fixed income ETFs. Stocks from main global indices for equity ETFs	No

* Depending on whether equities, bonds or cash are used as collateral

1 There may be intra-day breach of these limits and adjustments may be made the following day when fund valuations are known.

2 Securities lending at the fund level. To generate additional revenue, banks acting as counterparties may engage in securities lending outside the fund (typically by lending the securities of their hedging baskets). If so, the bank, not the fund, will assume the counterparty risk associated with this practice

3 The RBS Market Access TCA Index ETF employs funded swaps.

4 All UBS ETFs are expected to have moved to the model combining funded + unfunded swaps by the end of 2012.

Comparison of Synthetic ETF Structures in Asia

ETF providers	Synthetic Model	Swap counterparty(ies)	Minimum Level of Collateralisation ¹	Maximum Net Counterparty Exposure ¹ (% fund NAV)	Substitute Basket/Collateral	Securities lending ²
BOCI-Prudential	Access products (AXPs)	Multiple counterparties: Credit Suisse, Deutsche Bank, UBS	100%–120%*	0%	Liquid securities. Currently, constituent stocks of HSI and/or HSCEI and/or HSCI, or cash and cash equivalents	Only for the purpose of provision of collateral
CICC	Access products (Base Securities)	Multiple counterparties: UBS, Citigroup, RBS, Nomura	100%–120%*	0%	Cash and/or constituent stocks of the HSI and/or HSCEI or other Hong Kong-listed stocks	May engage in securities lending
Da Cheng	Access products (ALPs)	Multiple counterparties: Citigroup, Goldman Sachs, Merrill Lynch	100%–120%*	0%	Constituents of the HSI and/or HSCEI	May engage in securities lending
db X-trackers	Un-funded for fixed income, EURO STOXX 50 and MSCI World ETFs	Single counterparty: Deutsche Bank	95%	5%	Sovereign and investment grade bonds for fixed income ETFs. Sovereign and investment grade bonds and OECD country equities for all the ETFs	No
 Funded for all other ETFs		107.5%–120%*	0%		
iShares	Access products (CAAPs)	Multiple counterparties: Barclays, Citigroup, CLSA, Credit Suisse, Goldman Sachs, HSBC, ING, JP Morgan, Merrill Lynch, Morgan Stanley, RBS and UBS	100%–120%*	0%	Developed market government bonds and developed market equities	Only for the purpose of provision of collateral
Lyxor	Un-funded swaps	Single counterparty: Société Générale	100%	0%	OECD country equities (predominantly European) for equity and commodities ETFs. European government and corporate bonds for fixed income ETFs	No
Ping An	Access products (Base Securities)	Multiple counterparties: Citigroup, UBS	100%–120%*	0%	Hong Kong equities and cash	Only for the purpose of provision of collateral
UOBAM	Access products (Participatory Notes)	Single counterparty: Rabobank	90%	10%	Mainly Singapore government treasury bills	No
Xie Shares /EIP	Un-funded swaps	Multiple counterparties: Citigroup, JP Morgan, RBS	95%	5%	Cash or cash equivalent and/or bonds and/or equities which (1) have relatively stable earnings; (2) are constituents of the FTSE All World Index or the MSCI All Country World Index and (3) have a minimum market capitalisation of US\$4bn	No

* Depending on whether equities, bonds or cash are used as collateral

1 There may be intra-day breach of these limits and adjustments may be made at the end of the day or the following day when fund valuations are known.

2 Securities lending at the fund level. To generate additional revenue, banks acting as counterparties may engage in securities lending outside the fund (typically by lending the securities of their hedging baskets). If so, the bank, not the fund, will assume the counterparty risk associated with this practice

Comparison of Synthetic ETF Structures in Canada

ETF providers	Synthetic model	Swap counterparty(ies)	Minimum Level of Collateralisation*	Maximum Net Counterparty Exposure (% fund NAV)	Substitute Basket/Collateral	Securities lending
Horizons BetaPro	Forward Contract Agreement	National Bank Financial	90%	10%	Non-Dividend Paying Canadian Equities	Yes
	Total Return Swap	National Bank Financial			Cash and Cash Equivalents	
iShares	Forward Contract Agreement	Toronto Dominion Bank	90%	10%	Non-Dividend Paying Canadian Equities	No

* Depending on whether equities, bonds or cash are used as collateral

Comparison of Synthetic ETF Structures in Australia

ETF providers	Swap model	Swap counterparty(ies)	Minimum Level of Collateralisation	Maximum Net Counterparty Exposure (% fund NAV)	Substitute Basket/Collateral	Securities lending
BetaShares	Un-funded	Credit Suisse International	100%	0%	Cash and cash equivalents	No

Contact

Ben Johnson, Director, European ETF Research
ben.johnson@morningstar.com

Hortense Bioy, CFA, Senior ETF Analyst
hortense.bioy@morningstar.com

Jackie Choy, ETF Strategist, Asia
jackie.choy@morningstar.com

John Gabriel, ETF Strategist, Canada
john.gabriel@morningstar.com