## AUTO-CALLABLE YIELD NOTES 101



# ACYNs101

# **AUTO-CALLABLE YIELD NOTES**

# **First Trust**



As long as there are investors, there will be a need for income. Of course, the question is and will continue to be, "how does an investor capture potential income without investing in a long-term bond?" Auto-callable yield notes or "ACYNs" provide investors with the possibility of a higher stream of income than that of a standard debt security of the same maturity. ACYNs, like all structured products, are complex investments and are not suitable for all investors. The following is intended to be a basic primer to help you gain an overall understanding of ACYNs.

## How do Auto-Callable Yield Notes Work?

ACYNs are senior, unsecured debt securities typically with maturities between 1-5 years. They are generally linked to the worst-performing of two reference assets<sup>1</sup>, which are often common stock indices like the S&P 500<sup>®</sup> Index<sup>2</sup> and the Russell 2000<sup>®</sup> Index.<sup>3</sup> ACYNs can also be linked to the performance of individual securities as well.

This brochure will use an ACYN tied to the worst-performing of two indices as the standard. It is very important to understand what the "worstperforming index" means. This is the index with the lowest return, which ultimately determines the different outcomes of the ACYN on a particular review date.



\* This brochure will use an asterisk to indicate the worst-performing index.

ACYNs have a lot of moving parts, but to keep things simple, the three key components are described in the name "Auto-callable Yield Notes." "Auto-callable" refers to the automatic call feature, "yield" references the interest payments, and finally "notes" indicates that ACYNs are a type of "principal at-risk" structured note, meaning an investor's principal could be subject to loss at maturity. Let's dive deeper into the mechanics.



WHY

HOW

## **Call Feature**

ACYNs have a built in call feature. When a note is called, it matures prior to the stated maturity date, and the entire principal amount is returned to the investor. A note can only be called on predetermined call review dates, which are typically quarterly, but monthly, semi-annual or annual review dates can be seen as well.

There are two types of call features to note:

**1. Automatic Calls (Autocalls):** Auto-callable yield notes (ACYNs) have an automatic call feature. A note will be automatically called if the worst-performing index is at or above its initial level on a call review date.

2. Issuer Discretion Calls: Callable yield notes (CYNs) have an issuer discretion call feature.

This means that a note will only be called at the issuer's discretion, despite the performance of either index on a call review date. For the remainder of this brochure, we will only discuss ACYNs, but it's important to note the difference between the two types of call features.

#### What is a call restriction period?

Some notes have call restriction periods, where the note may not be called for a specified time period. You might see "NC6Mo" or "NC1Yr" on the offering documents, which indicate "not callable for 6 months" or "not callable for 1 year" restrictions, respectively.

## **Interest Payments**

Investors are drawn to ACYNs as an income strategy, as they have the potential to pay interest over the term of the note. Quarterly interest payments are most common, but monthly, semiannual or annual interest payments can be seen in ACYNs as well. The offering documents of a note will list both the "per annum" (annual) interest rate, as well as the actual rate the interest will be paid (quarterly, monthly, etc).

ACYNs will pay one of two types of interest:

**1. Contingent Interest:** Payment is made to the investor only if certain conditions are met. These ACYNs will have an interest barrier, and the worst-performing index needs to be at or above this barrier on an interest payment review date for interest to be paid. The interest barrier is usually expressed as a percentage of the index's initial level. For example, an interest barrier at 70% of initial level means the the worst-performing index cannot fall more than 30% from its initial level on an interest payment review date, or the applicable interest payment will not be made. Interest payment review dates are typically scheduled three business days before the contingent interest payment dates.

**2. Fixed Interest:** Fixed payments are made on a scheduled basis until the note is called or matures, and no specific conditions need to be met. In other words, payments are made regardless of the indices' performance. Fixed interest ACYNs do not have an interest barrier.



\* For ACYNs with fixed interest, the review dates listed on the offering documents will be referring to call review dates only. Interest is fixed, and payments will be made on the payment date following the listed review date.



## Principal

Principal refers to an investor's initial amount of money invested. The component of an ACYN that directly affects the return of an investor's principal at maturity is the stated principal barrier. An investor's principal is not "at-risk" of being repaid unless the principal barrier is breached, which could ultimately lead to loss of principal at maturity.\* There are two types of principal barriers:

	1. American Principal Barrier	2. European Principal Barrier	
Observation	Observed daily	Observed only at maturity	
When is the barrier breached?	A barrier breach will occur if either index closes below the principal barrier <i>on any trading day</i> during the term of the ACYN.	Only the final level of the worst-performing index <i>at maturity</i> is used to determine if a barrier breach occurred. The performance of the indices prior to maturity will not affect the investor's principal.	
When would principal loss occur?	An investor would experience a principal loss if the following two events occur: 1) the principal barrier is breached on any trading day during the term of the note 2) at maturity, the worst- performing index is below its initial level.	An investor would experience a principal loss only if the principal barrier is breached at maturity.	
If a principal barrier is breached, are there instances where an investor's full principal could still be returned?	If an American principal barrier was breached, there are two instances where an investor can still receive their full principal repayment: 1) the note is automatically called, OR 2) the note reaches maturity and final level of the worst-performing index is at or above its initial level.	A European principal barrier can only be be breached at maturity and therefore will always result in a principal loss to the investor.	

\*An investor may also suffer a principal loss due to a default by the issuer. The discussion and examples in this brochure will assume there is no issuer default.

#### What other ways can the principal barrier be described in an ACYN's offering documents?

The following terms may be used interchangeably for "principal barrier": trigger level, contingent protection, or soft buffer. The value of the principal barrier may also be expressed in different ways. For instance, a principal barrier at "70% of initial level" can also be stated as "30% contingent protection."

## Will the investor receive their initial principal at maturity?



#### **Pricing Date**

This is the "starting point" of an ACYN. On the pricing date, the initial levels of the indices are set. These initial levels will be referenced throughout the term of the ACYN when determining interest payments, calls, and barrier breaches.

#### **Review Dates**

Typically, the interest payment review dates and call review dates occur on the same day according to the note's predetermined review schedule (quarterly, monthly, etc). The performance of the indices are reviewed on those dates to determine whether the note will be called and/or whether an interest payment will be made, on the corresponding payment date.\*

#### **Payment Dates**

If an ACYN is paying interest or is called, the money will be paid to investors on the payment date, which is often 3 to 5 business days following the review date.

#### **Final Review Date**

The final levels of the indices are reviewed and the worst-performing index will determine: 1) if investors will receive a final interest payment\* 2) how much of the initial principal will be repaid to the investors at maturity.

#### **Maturity Date**

The maturity date marks the end of the term of the ACYN and can be thought of as the "final payment date" for the investor's principal and interest, if applicable.

\*For ACYNs paying fixed interest, the review dates determine calls only. Recall, interest is fixed, and payments will be made on each payment date.

## Examples

Now that the key components of ACYNs have been explained, we will go through three examples of ACYNs with varying interest payments (Contingent vs Fixed) and principal barriers (American vs European) to help illustrate the possible outcomes an investor in an ACYN may experience both during the term of the note and at maturity.

#### **Example 1 – ACYN with Contingent Interest and American Principal Barrier**

#### **Example 2 – ACYN with Contingent Interest and European Principal Barrier**

#### **Example 3 – ACYN with Fixed Interest and American Principal Barrier**

To help you keep track of all of the moving parts, use the road maps as a guide in determining the different outcomes for each ACYN example. Once again, we will continue using a standard ACYN linked to the worst-performing of two indices (the S&P 500<sup>®</sup> Index and the Russell 2000<sup>®</sup> Index). Always use the "worst-performer" to determine interest payments, calls, and barrier breaches. Also, we will use \$1,000 as the principal, or the original amount of money invested. Let's get started.

# EXAMPLE 1

## Note Terms

15 Month Maturity

**Reference Asset:** Worst-of SPX & RTY Initial Levels of 100 for both indices

#### **Auto-Callable Quarterly**

**Contingent Interest:** 8% per annum (2% quarterly)

**Interest Barrier:** For each index, 70% of its initial level (observed quarterly); Interest barrier level of 70

**Principal Barrier:** For each index, 70% of its initial level; American (observed daily); Principal barrier level of 70

- S&P 500<sup>®</sup> Index (SPX)
- Russell 2000<sup>®</sup> Index (RYT)
- Ӿ 🛛 Worst-performing Index

## Scenario 1: Not Called

When is the interest paid? In this scenario, the worst-performing index stays above the interest barrier level of 70 on each quarterly review date. The investor receives the contingent interest payment each quarter, including the final review date (2% interest rate x \$1,000 principal = \$20 interest payment).

**Was this note called?** For a note to be automatically called, the worst-performing index has to be at or above its initial level on a quarterly review date. This did not occur during the term of this note, and so it is not automatically called.

What happens to the initial principal? This example has an American principal barrier, which is observed daily. The principal barrier is not breached on any day during the term of the note, as neither index fell below the principal barrier level of 70. Therefore, at maturity, the investor's initial principal is returned along with the final interest payment (\$20 interest payment + \$1,000 principal repayment = \$1,020).

**Summary:** Investor received \$100 total in interest payments and \$1,000 principal repayment.





## Scenario 2: Called

When is the interest paid? On the first three review dates, the worst-performing index was above the interest barrier. The investor receives the 2% contingent interest payment for those three quarters.

**Was this note called?** On the third review date, the worst-performing index (RTY) is at or above its initial level of 100, and the note is automatically called six months prior to maturity. The investor's initial principal is returned, along with the 2% interest payment received for the third quarter (\$20 interest + \$1,000 principal repayment = \$1,020).

What happens to the initial principal? During the second quarter, RTY falls below the principal barrier level of 70, resulting in a principal barrier breach. If this note was held to maturity, the barrier breach could have resulted in principal loss to the investor. However, since this note was automatically called, the investor's full principal is returned, despite the principal barrier breach that occurred earlier during the second quarter.

**Summary:** Investor received \$60 total in interest payments and \$1,000 principal repayment; note was automatically called 6 months prior to maturity.

Payment

Principal

Investment

Interest

## Scenario 3: Barrier Breach

When is the interest paid? On the first three review dates, the worst-performing index stays above the interest barrier. The investor receives the 2% contingent interest payment for those three quarters. On the fourth review date, SPX falls below the interest barrier, resulting in no interest payment for the fourth quarter. On the final review date, the worst-performing index (SPX) is above the interest barrier, so the investor receives the final 2% interest payment at maturity.

**Was this note called?** The worst-performing index is not at or above its initial level on any review date. As a result, this note is not called.

**What happens to the initial principal?** During the fourth quarter, SPX falls below the principal barrier level of 70, resulting in a barrier breach. This barrier breach means that the investor's principal is exposed to 1:1 loss at maturity. On the final review date, the worst-performing index (SPX) closes at 75, which is 75% of its initial level. Therefore, the investor will receive 75% of their initial principal (75% x 1,000 = \$750) at maturity, due to the principal barrier breach that occurred earlier in the fourth quarter.

**Summary:** Investor received \$80 total in interest payments and \$750 principal repayment (\$250 principal loss)



Interest

Principal +

Interest



# EXAMPLE 2

## **Note Terms**

**15 Month Maturity** 

**Reference Asset:** Worst-of SPX & RTY; Initial Levels of 100 for both indices

#### **Auto-Callable Quarterly**

**Contingent Interest:** 6% per annum (1.5% quarterly)

**Interest Barrier:** For each index, 70% of its initial level (observed quarterly); Interest barrier level of 70

**Principal Barrier:** For each index, 70% of its initial level; European (observed only at maturity); Principal barrier level of 70

- S&P 500<sup>®</sup> Index (SPX)
- Russell 2000<sup>®</sup> Index (RYT)

## Scenario 1: Not Called

When is the interest paid? For this scenario, the worst-performing index is above the interest barrier on the first two review dates. The investor receives the 1.5% contingent interest payment (\$15) for the first two quarters. On the third review date, SPX falls to 71 and RTY falls to 62. Since RTY, the worst-performing index, is below the interest barrier level of 70, no interest is paid to the investor for the third quarter. On both the fourth and final review dates, SPX and RTY are at or above the interest barrier, so the investor receives the fourth and final interest payment.

**Was this note called?** On each call review date, the worst-performing index is not at or above its initial level of 100. As a result, the note is not automatically called.

What happens to the initial principal? Let's revisit the third review date, when SPX fell to 71 and RTY fell to 62. RTY's drop would not be considered a barrier breach, since this note has a European principal barrier. European barriers can only be breached if the worst-performing index drops below the principal barrier on the final review date. Here, both SPX and RTY were above the principal barrier level of 70 on the final review date, so the investor's full principal is returned at maturity.

**Summary:** Investor received \$60 total in interest payments and \$1,000 principal repayment.





## Scenario 2: Called

When is the interest paid? On the first four review dates, the worst-performing index is above the interest barrier level of 70. The investor receives the 1.5% contingent interest payment for those four quarters.

**Was this note called?** On the fourth review date, the worst-performing index (SPX) is above its initial level of 100. As a result, the note is automatically called. The investor's initial principal is returned, along with the 1.5% interest payment received for the fourth quarter. (\$15 interest + \$1,000 principal repayment = \$1,015).

What happens to the initial principal? The investor's full principal is returned when the note is automatically called.

**Summary:** Investor received \$60 total in interest payments and \$1,000 principal repayment; note was automatically called 3 months prior to maturity.



	Pricing Date	Review Dates			Date (Maturity)	
		Q1	Q2	Q3	Q4	Q5
SPX	100	75*	85*	95*	105*	_
RTY	100	90	110	120	130	_
Payment	\$1,000 Principal Investment	\$15 Interest	\$15 Interest	\$15 Interest	\$1,015 Principal + Interest	_

## Scenario 3: Barrier Breach

When is the interest paid? The worst-performing index is above the interest barrier level of 70 on the first three review dates. The investor receives the 1.5% contingent interest payment for those three quarters. On the fourth review date, the worstperforming index (RTY) falls below the interest barrier and remains below the interest barrier on the final review date. Therefore, the investor does not receive interest payments for the last two quarters.

Was this note called? The note is not automatically called because the worst-performing index is not at or above its initial level on any review date.

What happens to the initial principal? RTY falls to 68 on the fourth review date. It is important to understand that this was not a principal barrier breach, since this note has a European principal barrier, which only observes the worst-performing index level on the final review date. However, on the final review date the principal barrier was breached, with the worst-performing index (RTY) falling to 65, or 65% of its initial level. This barrier breach exposes the investor's principal to 1:1 loss based on the worstperforming index. As a result, the investor will receive 65% of their initial principal at maturity.

**Summary:** Investor received \$45 total in interest payments and \$650 principal repayment (\$350 principal loss).



## EXAMPLE 3



## Scenario 1: Not Called

When is the interest paid? Both indices fall significantly from their initial levels during the first two quarters. Both indices start to recover in the third quarter and continue rising to the final review date. Because this note pays fixed interest, the investor receives the 0.80% interest payment (\$8) each quarter, despite the ups and downs in the indices' performance.

Was this note called? The automatic call feature would not kick in, since both indices were below their initial levels on every quarterly review date.

What happens to the initial principal? The American principal barrier was breached in the first quarter, when the worst-performing index (SPX) falls below the principal barrier level of 70. This barrier breach exposes the investor's principal to 1:1 loss at maturity. However, on the final review date, the worst-performing index (RTY) closes at 105. This is an instance where the principal barrier was breached, but the worst-performing index is at or above its initial level at maturity, so the investor's full principal is returned. At maturity, the investor receives their full \$1,000 principal repayment in addition to the final \$8 fixed interest payment.

**Summary:** Investor received \$40 total in interest payments and \$1,000 principal repayment.



## Scenario 2: Called

When is the interest paid? Since this note has a quarterly fixed interest payment, interest is paid for the first quarter, despite the performance of SPX or RTY.

**Was this note called?** Both SPX and RTY rally during the first quarter. Because the worst-performing index (SPX) is above its initial level of 100 on the first review date, the note is automatically called.

**What happens to the initial principal?** The investor's full \$1,000 principal is returned when the note is automatically called (along with the \$8 fixed interest payment for that quarter).

**Summary:** Investor received \$8 total in interest payments and \$1,000 principal repayment; note was called 12 months prior to maturity.



\$1,000

Principal

Investment

Payment

\$1,008

Principal +

Interest

## Scenario 3: Barrier Breach

When is the interest paid? Let's assume a catastrophic market environment, where SPX and RTY drop significantly relative to their initial levels for the full 15 month term of the note. Despite this poor performance, the investor recieves the 0.80% fixed interest payment (\$8) each quarter, as there are no conditions that need to be met for the interest payments to be made.

Was this note called? The note is not automatically called because the worst-performing index is not at or above its initial level on any quarterly review date.

What happens to the initial principal? The American principal barrier was breached during the first quarter when RTY first fell below the principal barrier level of 70. Therefore, the investor's principal is exposed to 1:1 loss at maturity. On the final review date, the worst-performing index (SPX) falls to 55, which is 55% of its initial value. As a result, the investor will receive 55% of their initial principal at maturity (\$550), along with the final \$8 interest payment for that quarter.

**Summary:** Investor received \$40 total in interest payments and \$550 principal repayment (\$450 principal loss).



## **Pricing Considerations**

ACYNs will trade at a discount on the first day after purchase. This means that an ACYN will trade below the \$1,000 original purchase price. The discount is due to the fees and costs that are embedded in the price of the ACYN. The ACYN will be worth less than the original purchase price immediately after issuance. The issuer of the ACYN will typically disclose an estimated initial value in the offering documents.

ACYNs lack liquidity. ACYNs are not listed on any securities exchange and an investor may not be able to sell an ACYN prior to maturity. An issuer may offer to purchase an ACYN in the secondary market but it is not required to do so. The price, if any, at which an issuer may be willing to purchase an ACYN in the secondary market, if at all, may result in significant loss of principal. An investor should be able and willing to hold an ACYN to maturity. ACYNs will trade at a discount on the first day after purchase. This means that an ACYN will trade below the \$1,000 original purchase price.

## **Tax Considerations**

For ACYNS, tax treatment of contingent coupons may be considered taxable ordinary income at the time the income is received. If the notes are called, sold, or mature, the investor should recognize a capital gain or loss. Capital gain is generally taxed as ordinary income when held for one year or less and is generally taxed as long-term capital gains when held for longer than a year. Please note, ACYNs with fixed interest payments may have a different tax treatment.

The U.S. federal income tax treatment for ACYNs is uncertain as the IRS may determine that a different tax treatment applies. First Trust does not provide tax advice. Consult a tax advisor regarding the U.S. federal income tax implications of an investment in an ACYN.

## Other Risk Considerations

An investment in an ACYN may result in a loss. ACYNs do not guarantee any return of principal (do not provide 100% principal protection). The barrier provides only limited downside protection against loss and applies only if the note is held to maturity.

The potential return on an ACYN is limited to the principal amount plus interest income, if any, regardless of any appreciation of the reference asset(s), which may be significant.

An investor in an ACYN will lose some or all of their principal investment if the reference asset declines by more than the stated barrier level given the observation of the principal barrier. American principal barriers are observed daily during the term of the note while European principal barriers are observed only at maturity.

ACYNs are classified as senior unsecured debt. Payment on an ACYN is subject to the credit risk of the issuer. Credit risk means that if the issuer were to default on payment obligations, the ACYN investor may not receive any amount owed under the ACYN and could lose their entire principal investment.

The automatic call feature inherent in ACYNs may force a potential early maturity. There is no guarantee that an investor will be able to reinvest the proceeds at a comparable interest rate for a similar level of risk.

The potential return on an ACYN is subject to market volatility and the risks associated with the reference asset(s). The return of an ACYN may be zero or less than what could have been earned on a traditional fixed income security.

Contingent interest payments are determined by the performance of the reference asset(s) on the respective observation dates. Fixed interest payments are made regardless of the reference asset(s) performance.

ACYNs are not deposit liabilities or other obligations of a bank and are not insured or guaranteed by the Federal Deposit Insurance Corporation (FDIC) or any other governmental agency or program of the United States or any other jurisdiction.

#### The risks identified above are not exhaustive. Refer to an ACYN's offering documents for additional information.

There are a wide variety of notes available, with attributes which affect their risks and potential rewards. Before making any investment decision, you should obtain advice from your financial, legal and tax advisers for information about and analysis of the investment, its risks and its suitability in your particular circumstances. Structured products are complex products and are not suitable for all investors.

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<sup>1.</sup> Reference Asset – one or more underlying security, index, currency, commodity, fund or other asset used to calculate the return of a structured note at maturity.

<sup>2.</sup> S&P 500 Index (SPX) - an unmanaged index of 500 stocks used to measure large-cap U.S. stock market performance.

<sup>3.</sup> Russell 2000 Index (RTY) – measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000<sup>®</sup> Index is a subset of the Russell 3000<sup>®</sup> Index representing approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership.

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