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The rise and rise of capital protected products

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Growth in capital protected products in Australia has been unprecedented, with new flows for many issuers in 2007 achieving more than double their expectations.[1]

Why is this so? Perpetual has spent the past 18 months conducting market research to explore the trends. Perpetual researchers polled the views of investors and industry players locally and abroad. A key conclusion of the study is the strong likelihood that capital protected products will find a firm place in a wider range of investors' portfolios.

This view is not without its detractors – the most common view heard from investors was 'Why would I pay for capital protection – the chance that I would lose money over a six to eight year period in Australian shares is almost zero?'

For some investors, this may hold true – a simple capital protected product over Australian shares doesn't make sense for them. But, it's not one size fits all. Different capital protected products are relevant for different types of investors.

This paper presents some different ways of looking at how capital protected products might fit into an investor's portfolio. It also seeks to illustrate how gearing into a capital protected product can affect expected returns and concludes with Perpetuals view on future trends for structured products in Australia.

Why capital protection?

The most common question that came up during the Perpetual study was the value of capital protection over longer term investment time frames and within certain asset classes.

Yet this paper contests that capital protection is attractive to a broad cross-section of Australian investors as it provides a greater level of security to investors who, for various reasons, may be nervous about the volatility of equity markets yet desire more than the cash return on their capital. With capital protection in place, the initial investment is protected against significant loss, no matter what market conditions prevail.

Capital protected products with a lending facility are ideal for those investors who are cash rich but asset poor (typically categorised as Generation X wealth accelerators by who? Perpetual?), as an investment in capital protected products can be funded by an investment loan rather than an investor's own capital. The ongoing payments to cover the investment loan interest payments can then be made from the investor's cashflow.

Offering capital protected products with lending enables advisers to attract and profitably service the emerging wealthy - a new segment that is important to the future growth of advice businesses.

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[1] Source: Perpetual

Global growth of capital protected products

While relatively new in Australia, capital protected products have been incredibly popular in Europe (the leading market for these types of products). New flows have grown at 25 per cent per year for the last three years.[2] This has been fuelled by an environment of low interest rates and retail investors who still remember the pain of global equity market corrections earlier this decade. Growth is expected to continue as these products enter the mainstream and new players (such as asset managers and insurers) drive further innovation.

European advisers are now aware of the growing number of alternatives to traditional 'long-only' equity products for their clients. Four out of five UK financial advisers see capital protection as one of the building blocks of a sensibly diversified portfolio and regularly recommend these types of products.[3] In Germany, a retail investor can buy a capital protected product from their local post office (which also provides banking services).[4] In Switzerland, a typical affluent client holds between five to ten per cent of their portfolio in products with some level of capital protection.[5]

Product structures have focused on either protected growth or protected income enhancement. Historically this has been through exposure to traditional equity markets (initially through indices, and more recently through managed funds, including hedge funds). These structures may also offer leveraged returns, sometimes with less than 100 per cent protection. The emerging trend has been to seek protected exposure to new markets (such as emerging markets and commodities), which is consistent with a global search for new sources of alpha.

The Australian story

What Australian investors told Perpetual in their study was:

- they want higher returns and income and are happy to look at newer asset classes (such as hedge funds, commodities and emerging markets). However, some are nervous about the potential volatility and still remember the Asian market crash, for example.
- tax-effective strategies remain important even with the reduction in marginal tax rates. While Australian marginal tax rates are considered high by world standards, a positive change has been the reduction in marginal tax rates, increasing the level of free cash flow available for investments and to service debt.
- they are worried about having enough income to support the retirement lifestyle they want.

Addressing these issues has resulted in unprecedented growth in capital protected products in the Australian market over the last three years. However, to date this has been dominated by protected lending products – where retail investors have borrowed to invest in a capital protected growth product – a strategy rarely seen in Europe.

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[2] Source: Perpetual
[3] "Capital Protection key to UK advisers, says Skandia survey", StructuredRetailProducts.com, 20 December 2006
[4] Discussions with Mercer Oliver Wyman, August 2006
[5] Presentation by Francois Bloch, Managing Director, Amas Bank, Structured Products World conference, October 2006

New flows into protected lending managed fund products in Australia during 2006 were well over $1 billion.[6] This trend has continued in the first half of 2007, with over $2 billion invested to June 2007, as many issuers raised more than double their targets.

The growth and difference in usage of capital protected products in Australia, when compared with Europe, can be attributed to:

- Australian lenders willing to offer 100 per cent loan-to-value ratios against protected products which attracts those wealth accumulating investors whose relatively low asset base would otherwise limit their gearing capacity
- high marginal tax rates which make gearing a tax-effective strategy for high income earners
- strong Australian equity market performance for the last five years (which makes gearing all the more attractive).

Capital protected products in the Australian market can be broadly categorised into four main categories.

1. Managed funds

Protection is provided over a menu of ASIC registered wholesale or retail managed funds. The protection is usually provided over each fund individually. The menu of funds usually includes Australian equities, international equities and specialist asset classes. The menu has sufficient choice to allow investors to build a diversified portfolio which meets their risk/return profile.

2. Hedge funds

Protection is provided over fund-of-funds and single funds, with most products including at least one fund-of-fund.

3. Thematic products

These products provide exposure to a current theme. Some of the current themes are Asia, BRIC countries (Brazil, Russia, India and China), renewable energy, commodities, water and agriculture. Performance of these products is usually linked to an index or a basket of shares, with the occasional use of an underlying fund.

4. Income products

Capital is protected but the income received is either variable or contingent on certain events. Most commonly the receipt and amount of income is dependent either on the performance of a basket of corporate debt, or a basket of equities.

Even though the market has expanded, Australians hold less than one per cent of their portfolio in capital protected products,[7] well short of the five to ten per cent level held by Europeans. Perpetual expects further growth will be driven by an increasing awareness that capital protection is generally relevant for most investors' portfolios.

[6] Source: Perpetual
[7] Source: Perpetual

Gearing – the effect on expected returns

Gearing is the most common strategy used to invest in capital protected products. Borrowing to invest offers the potential to significantly enhance returns and, unlike typical gearing strategies, protects the investor against risk of significant loss. It is important, however for advisers to understand how the combination of the structure and gearing alters the risk/return profile of the underlying client's investment. This ensures each client invests in the product that is most suitable for their needs.

The return received by the investor will be affected by a number of factors including:

- the return of the underlying investment
- the method of providing capital protection and the appropriateness to the underlying investment
- the fees in the structure, both implicit and explicit
- the cost of lending
- the tax-effectiveness of the combined product and lending package.

While the return on the underlying investment is clearly the most important determinant of the return received by the investor, other factors can have a significant effect.

The following example (based on a typical capital protected product sold in the Australian market) illustrates how the return to an investor is affected by structuring and gearing characteristics.

1. Term: 7 years
2. Underlying: Australian equity fund
3. Method of capital protection: constant portfolio protection insurance (also known as dynamic management)
4. Fees: 0.75% pa administration fee plus 0.65% pa put option premium
5. Interest rate on borrowing: 8.90% pa fixed for the term paid annually in advance
6. Loan to value ratio: 108.9% (100% of Investment plus the first year's interest)
7. Tax Deductibility: 85% of interest and put option premium
8. Taxable Income: 4% income yield, 90% franked 3% per cent distributed capital gains, with half subject to the 50% capital gains discount
9. Marginal tax rate: 46.5%

Expected return

Chart 1 below shows the internal rate of return earned by the investor on actual cash flows. The cash flows consist of interest paid on the loan, tax paid on income, any tax paid as a result of the sale of investments (in terms of the dynamic management), and the final proceeds received at maturity (net of tax and loan repayment).

Chart 1– After-tax internal rate of return vs underlying fund return

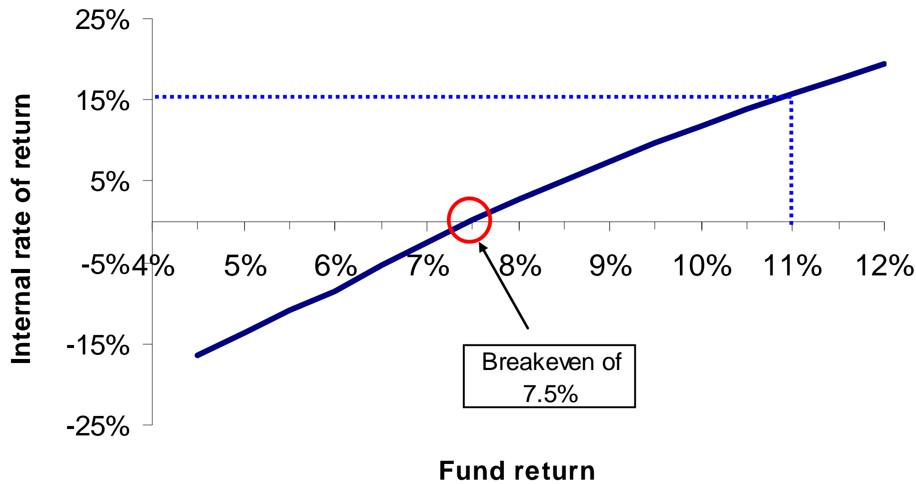
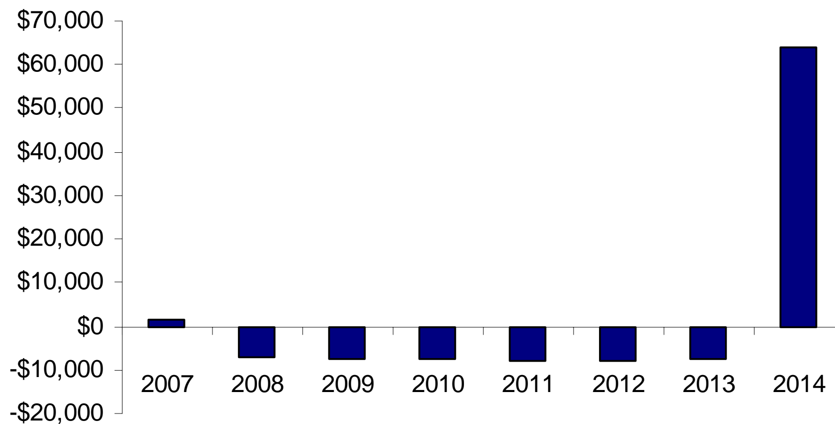


Chart 2 below shows sample cash flow profile over the term of the investment based on a 11 per cent per annum total return (including income), 46.5 per cent marginal tax rate and an initial investment of $100,000.

Chart 2 – Annual investor cashflows



As can be seen from Chart 2, an underlying fund return of 11 per cent per annum (net of fund fees) generates a return of 15 per cent per annum for a 46.5 per cent marginal tax payer.

At first glance this does not make sense, as the investor is paying interest of 8.90 per cent per annum and fees of 1.4 per cent per annum, so you would expect a return on the investor's cashflows to be only slightly higher than 11 per cent per annum. It is significantly higher because of the additional return generated by franking credits, the tax benefit of paying interest in advance, and discounted capital gains tax which applies to the maturity proceeds.

The break even return on the underlying fund is 7.5 per cent per annum for a 46.5 per cent marginal tax payer. The break even return is defined as the investment return required on the underlying investment that will result in the investor receiving, at the protection end date, the sum of all cashflows invested. In other words, it is the required return on the underlying investment to achieve an internal rate of return of zero per cent

This analysis supports the use of capital protected products as a gearing strategy for some investors.

How dynamic management works [This section should be placed on the side in a break out box]

The example shown uses dynamic management to protect the invested capital. A key component of dynamic management involves the rebalancing of a portfolio between a risky asset (eg units in a fund) and a riskless asset (eg cash-like investments). The monitoring of a portfolio begins by firstly establishing a 'bond floor'.

The bond floor is the hypothetical amount that would need to be invested in cash to make sure it grows to an amount at least equal to the protected amount by the end of the protection period. The portfolio and bond floor are monitored regularly, as they change in line with market movements and current interest rates. Once the bond floor has been determined, a sell trigger and a buy trigger can be calculated.

The aim of the triggers is to ensure that the portfolio is at least worth the protected amount at maturity. A secondary objective is to maximise the exposure to the fund (or risky asset) as much as possible, as this is where the greatest potential for capital growth lies. To help achieve these objectives, a buffer between the bond floor and the portfolio's value is calculated by the model behind the dynamic management strategy.

This seeks to ensure that there is enough time to reallocate the portfolio away from the risky asset. This is called a sell trigger and occurs where the value of the portfolio encroaches on the buffer (see Chart 3).

Once the value of the portfolio rises back above the buffer, the portfolio is re-allocated back to the risky asset. This is called a buy trigger (see Chart 4).

Chart 3 – Sell trigger

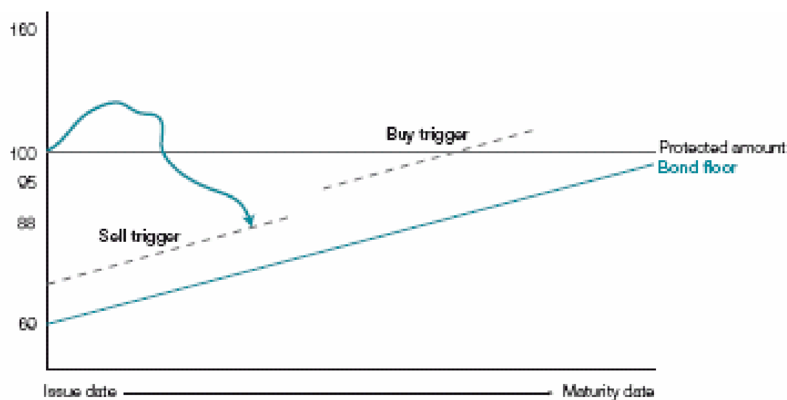
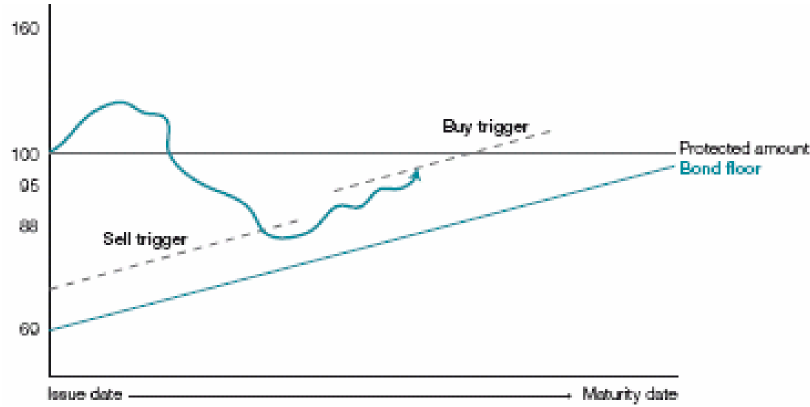


Chart 4 – Buy trigger

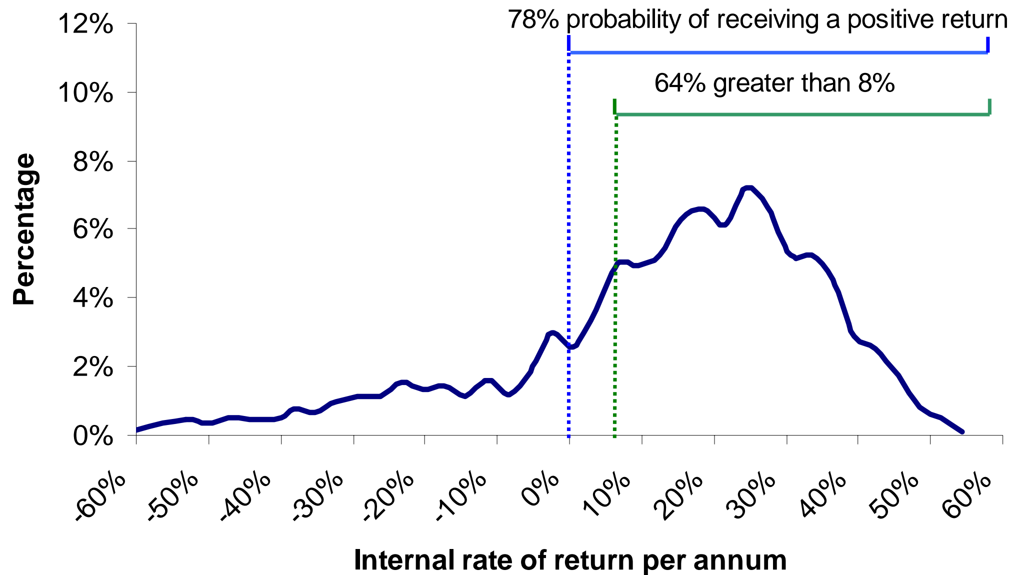


Volatility of returns

The results in the above example assume no volatility in the returns of the risky asset from day to day. However, as we all know there are no free lunches – in the real world you cannot have returns without risk.

The return achieved on a capital protected product which uses dynamic management is affected by volatility of the underlying investment. This example used a Monte Carlo simulation model, which replicates the product structure, to calculate the expected distribution of returns.[8]

Chart 5 - After-tax return distribution



The graph above shows that the investor has a 78 per cent probability of breaking even, and a 64 per cent probability of receiving an after-tax return in excess of 8 per cent annum. The 64 per cent compares favourably with an ungeared investment, where the probability of receiving an after-tax return of 8 per cent

[8] Source: Perpetual

per annum is approximately 50%. Of course, being a 100 per cent geared investment provides significantly higher upside than an ungeared investment. On the downside the investor can lose their entire investment (made up of interest on the loan and tax paid along the way) if the capital protected product only pays out the original protected amount.

The above example demonstrates that, while gearing can increase the potential after-tax return of the investment, using dynamic management can also protect the underlying invested capital. The risk to an investor is the loss of the interest on the loan and tax paid along the way, if the portfolio falls below the protection level and is fully invested in the riskless asset.

Changing the risk return profile of an investment

One of the benefits of capital protected products is that they can be used to introduce new asset classes into an investor's portfolio. This is illustrated by the scenario below, where an investor is attracted to a global resources fund by the potential for high returns. The investor is, however, nervous about the volatility of the fund and the potential that a significant amount of capital may be lost. Global resources have been used in this example to demonstrate that by adding a high risk asset to a conservative investor's portfolio, you can increase returns without significantly increasing risk.

We first consider the likelihood of the investor losing capital and the trade-off the investor makes by buying capital protection. We have assumed the global resources fund has an expected return of 16 per cent per year and a volatility of 18 per cent. [9] Our analysis of this hypothetical investment suggests that over a seven-year period, the probability of a pre-tax loss is just above one per cent. [10]

However, we need to adjust for the fact that we used normally distributed returns, which has the effect of understating the extreme scenarios. In reality, the probability of loss is closer to two per cent (four times the probability of loss in Australian equities), with the potential magnitude of the loss, in some circumstances, almost twice that in Australian equities. While this may not sound high to some, it may be a risk that others aren't prepared to take.

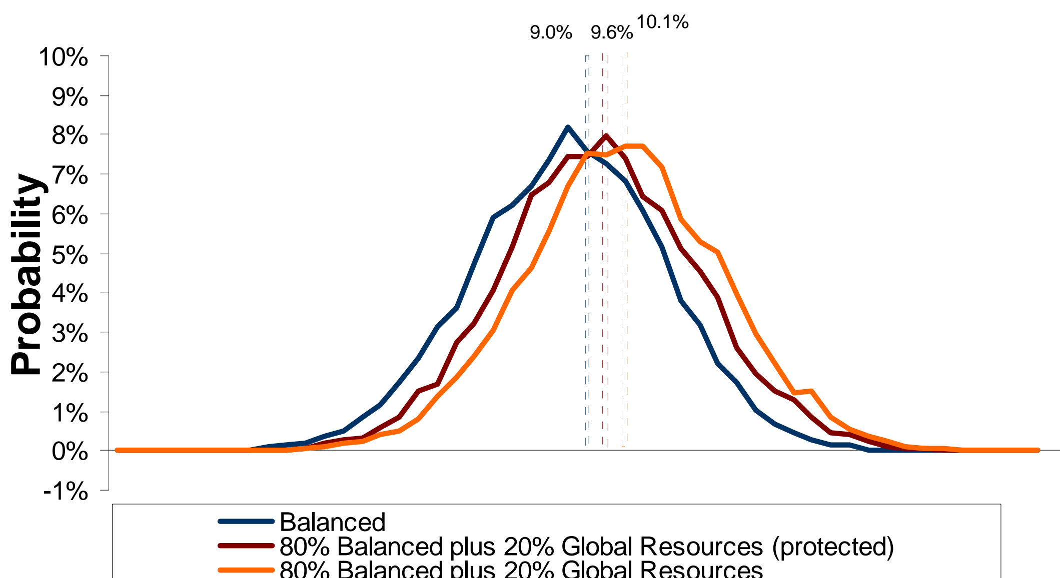
A potential solution might be to add a protected version of the global resources fund to the investor's portfolio, rather than investing without protection. Both the protected and unprotected investments have the potential to improve the risk/return profile of investor's current portfolio (assumed to be invested in a balanced portfolio) by shifting the expected return from 9 per cent per year to 9.6 per cent by adding the protected fund, and to 10.1 per cent, by adding the unprotected fund (Chart 6). [11]

[9] Based on historical annual returns of 22 per cent for global resources for the last seven years, adjusted downwards based on a forward view of some correction in global resource markets. Volatility is based on historical volatility for the last seven years.

[10] Loss is defined in absolute terms, ie less than zero.

[11] The balanced portfolio is assumed to have an expected return of 9 per cent and an expected volatility of 7 per cent based on our forward looking assumption on Australian equity market returns (adjusted for returns to other asset classes) and historical volatility for the last nine years. We assume investor invests 20 per cent of her portfolio in the global resources fund and 80 per cent remains in the balanced portfolio.

Chart 6 - Return distribution



There is little difference on the downside between the portfolio with the protected fund and the original portfolio, as capital protection reduces the risk of loss from investing in the global resources fund. Investing in the unprotected global resources fund, however, increases the probability and magnitude of loss at the extreme (as seen by the longer tail in Chart 6). Again, this is somewhat understated due to the assumption of returns being normally distributed.

The right portfolio for the investor (including the amount allocated to various investments) will depend on factors such as the investor's view of global resources markets, investment goals, risk profile, tax and cash flow position. The inclusion of capital protection has simply broadened the investor's choices.

Future trends in capital protected products

Using capital protected lending structured products with a lending facility will continue to be seen as a sound strategy for the right investor. However sentiment is changing, with the underlying assets used for protected lending products shifting away from the more traditional Australian equities to the more thematic-type asset classes such as commodities and emerging markets. Alternatively, investors and advisers may prefer leverage within a structure as the means of increasing the return potential of a less volatile asset class (such as hedge funds).

With this change in sentiment, greater investor focus will be on an increased use of protection and structures to repackage returns from any asset class in the form of income (not just traditional income asset classes). An example is restructuring the returns from a protected leveraged basket of stocks to deliver an income stream, rather than capital growth, as seen in some capital protected products that are now being offered. Capital protected products may also be combined with a form of 'insurance' to create a

longevity product that protects an investor who may otherwise outlive their current level of income and assets.

As the market evolves there may also be greater demand for combined protection and leverage structures that allow investors to access newer sources of alpha in a way that better suits their risk profile. For example, some investors may want to be protected but are happy to trade-off some protection for higher returns. Products that are either less than 100 per cent protected or protected unless there is a fall greater than a certain percentage may have increasing appeal and start to be more widely offered.

Growth of capital protected products set to continue

There is a market for new products that provide higher returns and capital protection. These products enable advisers to attract and profitably service the emerging wealthy, as well as assisting those clients who are concerned about their tax planning. These new market segments are important if advice businesses are to grow into the future.

In addition, the 'Better Super' system has increased the importance of finding new ways to attract and service the ever-growing retiree segment. This includes meeting their need for income (ideally for their remaining life), which has been challenging given many have insufficient superannuation to lead what Perpetual believe to be a comfortable retirement.

Poor performance and sometimes inappropriate use of high risk strategies, such as certain mezzanine mortgage funds, within the retiree segment has also heightened the need for both advisers and investors to improve their understanding of the risks involved in generating returns.

While structured products are currently used by those more affluent investors, advisers need to review these products more closely and think how they can be potentially applied across all their clients, as a way of better helping them meet their financial goals.

As more products designed to meet the specific demands of investors come to market and advisers become more comfortable in their application, Perpetual expect the recently strong growth of capital protected products to continue for some time.

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