

# G]fYbYb!HYgh]b`7c hhVi g. `K ÒW Yb h`]W X Yf Dfc VYU`Ufa `ghUfhYh`k ]YXYf

7c hhVi g`hYghYh`UV`gcZcfh`YXYb`A ]hkcW`i a`%) .\$\$`i \f`X]Y  
a`cXYfb]g]YfhYb`G]fYbYb" +%`5b`U[ Yb`[ Yk`À\`f`Y]ghYb  
G]W X Yf\`Y]h`i b`X`K`Ufbi`b[ Yb"

⊕`7c hhVi g`Yfh`ÒbYb`UV`gcZcfh`YXYb`A ]hkcW`i a`%) .\$\$`i \f`  
k ]YXYf`X]Y`j`YfhfUi`hYb`G]fYbYb]g][`bU`Y" `N]Y`X]YgYf`k`ÒW`Yb`h`]W`X`Yb  
HYghg`]gh`Ygž`X]Y`:`i`b`\_h]cbgZ`À\`][`\_Y]h`X`Yf`%+`a`c`X`Y`f`b`Y`b`  
K`Ufbg]fYbYb`]a`GhUXh[ YV]Yh`g]W`X`Yf`ni`ghY`Yb" `8]YgY`G]fYbYbž`X]Y`  
]b`X`Yb`Y`h`h`Yb`A`cb`U`h`Yb`i`a`Z`U`b[`f`Y]W`X`Y`f`b`Y`i`Y`f`h`i`b`X`a`c`X`Y`f`b`]g]Y`f`h`  
k`i`f`X`Y`b`ž`g]b`X`b]W`X`h`i`b`i`f`]b`X`Y`f`@U[`Y`ž`K`Ufbg][`b`U`Y`UV`ni`[`Y`V`Y`b`ž`  
g`c`b`X`Y`f`b`U`i`W`X`i`f`W`X`g`U[`Y`b`j`c`f`ni`b`Y`a`Y`b"

8]Y`G`h`U`X`h`j`Y`f`k`U`h`i`b[`j`c`b`7`c`h`h`V`i`g`U`h`V`Y`\_`U`b`b`h`i`[`Y`[`Y`V`Y`b`ž`X`U`g`g`  
X]Y`g`Y`f`f`Y`[`Y`a`À»][`Y`H`Y`g`h`Y]b`Y`F`Ø`W`\_`Y`f`n`i`Y]b`Y`a`Z`F`Ø`Y`f`Y`b`  
G`m`g`h`Y`a`X`U`f`g`h`Y`h`ž`X`U`g`X`Y`b`6`Y`k`c`b`Y`f`b`V`Y`f`Y]h`g`U`i`g`j`Y`f[`U`b[`Y`b`Y`b`  
»\`f`n`Y`b`h`Y`b`V`Y`\_`U`b`b`h`i]g`h" `8]Y`G]fYbYb`VY]bXYb`g]W`]b`X`Y`f`F`Y`[`Y`  
U`i`Z`:`Y`i`Y`f`k`Y`f`[`Y`f`À`h`Y`À`i`g`Y`f`b`g`c`k`]Y`U`i`Z`<`c`W`X`À`i`g`Y`f`b`ž`k`c`g]Y`  
g`c`k`c`X]Y`6`Y`k`c`b`Y`f`U`g`U`i`W`X`X]Y`6`Y`g`i`W`X`Y`f`X`Y`f`G`h`U`X`h`i`a`]h`  
k`]W`X`h][`Y`b`⊕`Z`c`f`a`U`h]c`b`Y`b`j`Y`f`g`c`f[`Y`b`\_`Ò`b`b`Y`b"

## A`c`X`Y`f`b`Y`H`Y`W`X`b]\_`Z`Ø`f`a`Y`\`f`G]W`X`Y`f`\`Y]h

8]Y`%+`K`Ufbg]fYbYb`k`i`f`X`Y`b`]b`X`Y`b`Y`h`h`Y`b`A`cb`U`h`Y`b`U`i`Z`X`Y`b`  
b`Y`i`Y`g`h`Y`b`G`h`U`b`X`[`Y`V`f`U`W`X`h" `9]b`V`Y`X`Y`i`h`Y`b`X`Y`f`5`g`d`Y`\_`h`X]Y`g`Y`f`  
A`c`X`Y`f`b`]g]Y`f`i`b[`g`a`U»`b`U`a`Y`b`k`U`f`X]Y`i`b`h`Y`f`g`h`Ø`h`n`i`b[`X`Y`g`i`6`i`b`X`Y`g`ž`  
X`Y`f`X]Y`?`c`g`h`Y`b`]b`<`Ò`Y`j`c`b`Y`h`k`U`%+`\$`\$`\$`\$`9`i`f`c`h`f`i`[`" `8]Y`  
I`a`g`h`Y`i`b[`X`Y`f`G]fYbYb`\`U`h`h`Y`g]W`X`Y`X`c`W`X`U`i`Z[`f`i`b`X`j`c`b`  
@]Y`Z`Y`f`g`W`X`k`]Y`f][`\_Y]h`Y`b`ž`X]Y`X]Y`V`Y`U`i`Z`h`f`U[`h`Y`:`]f`a`U`V`Y`h`f`U`Z`Y`b`ž`  
j`Y`f`n`Ò[`Y`f`h" `8`Y`b`b`c`W`X`\_`c`b`b`h`Y`b`X]Y`b`Y`i`Y`b`G]fYbYb`b`i`b`Y`f`Z`c`[`f`Y]W`X`

]bghU`Yfhi bX`]b`6Yhf]YV`[ Ybca a Yb`k YfXYb"

8]Y`G]fYbYb`g]bX`b]W`h`bi`f`]b`XYf`@U[ Yž`j`YfgW`]YXYbY`U`\_i`gh]gW`Y`  
G][ bU`Y`ZØf`5`Ufa`!`i`bX`9bhk`Ufbi`b[ Yb`UVni`gd]Y`Ybž`gcbXYfb`  
V]YhYb`Ui`W`X]Y`A`Ò[ `]W`\_Y]hž`k`]W`h][ Y`GdfUW`bUW`f]W`hYb`]b`  
?f]gYbg]hi`Uh]cbYb`Xi`fW`ni`[ YVYb`"8]Yg`ghY`h`Y]bYb`k`YgYbh]W`Yb`  
:cfhgW`f]hh`a`6YfY]W`X`Yf`; YZU`fYbUVk`Y`f`i`bX`XYg`  
6Yj`Ò`\_Yfi`b[ ggW`i`hnYg`XUf`i`bX`[ Yk`À`f`Y]ghYhž`XUgg`  
≠Zcfa`Uh]cbYb`gW`bY`i`bX`Y`ZY`\_h]j`Ub`X]Y`6Øf[ Yf`j`Yfa`]hhY`h`  
k`YfXYb`\_`ÒbbYb"

K ]W`h][ Yf`6YghUbXhY]`XYf`  
BchZU``\_ca`a`i`b]\_Uh]cb`

8]Y`fY[ Y`a`À`][ Yb`HYghg`gd]Y`Yb`Y]bY`YbhgW`Y]XYbXY`F`c`Y`]b`XYf`  
BchZU``\_ca`a`i`b]\_Uh]cb`"8Ug`K`]ggYb`i`a`X]Y`i`b`\_h]cbgZ`À`][ \_Y]h`  
XYf`G]fYbYb`[ ]Vh`XYb`6Øf[ Yfb`G]W`Yf`Y]hi`bX`gcf[ h`XUZØfž`XUgg`g]Y`  
]a`9fbghZU``gW`bY`i`bX`UX`À`ei`Uh`fYU[ ]YfYb`\_`ÒbbYb`"K`Yf`g]W`  
ØVYf`X]Y`j`YfgW`]YXYbYb`G][ bU`Zc`[ Yb`i`bX`X]Y`6YXYi`hi`b[ `XYf`  
Yk`Y][ Yb`HØbY`]bZcfa`]YfYb`a`ÒW`hYž`Z]bXYh`Ui`ZXYf`K`YVgY]hY`XYf`  
@Y]ghY`Y`@Ui`g]hn`Y]bY`,`VYfg]W`h`a`]h`<`ØfVY]gd]Y`Yb.`\`]Yf`"

8i`fW`X]YgY`A`U»`bU`a`Y`k`]fX`Y]b`HY]`XYf`  
G]W`Yf`Y]hg]bZ`Ughfi`\_hi`fž`XYf`]b`XYf`J`Yf[ Ub[ Yb`Y]h`c`Zh`  
j`YfbUW`À`gg][ h`k`i`fXYž`k`]YXYfVY`YVh`i`bX`]b`X]Y`a`cXYfbY`NY]h`  
ØVYfZØ`fh`8]Y`G]fYbYb`g]bX`b]W`h`bi`f`Y]b`Gma`Vc`ZØf`G]W`Yf`Y]hž`  
gcbXYfb`Ui`W`ZØf`X]Y`F`YU`\_h]cbgZ`À`][ \_Y]h`Y]bYf`GhUXh`]a`BchZU`"

≠g[ YgUa`h`nY][ h`X]YgY`≠]h]Uh]j`Yž`k`]Y`k`]W`h][ `Yg`]ghž`X]Y`  
VYghY`YbXYb`K`UfbgmghYa`Y`\_cb]bi`]Yf`]W`ni`ØVYfd`fØZ]b`i`bX`  
Ubni`dUggYbž`i`a`XYb`5bZcfXYfi`b[ Yb`Y]bYf`a`cXYfbYb`  
; YgY`gW`UZh[ YfYW`h`ni`k`YfXYb`"8]Y`GhUXh`7chhVi`g`gYhnh`a`]h`  
X]YgYb`A`U»`bU`a`Yb`Y]b`NY]W`Yb`i`bX`VY`\_f`À`Zh][ h`]f`9b[ U[ Ya`Ybh`  
ZØf`X]Y`G]W`Yf`Y]h`]fYf`6Øf[ Yf`"

K`À`fYbX`X]Y`G]fYbYb`YXYb`A`]h`k`cW`i`a`%)`.\$`\$`i`f`Yf`hØbYbž`  
\_`ÒbbYb`g]W`X]Y`9]bk`c`bYf`Ui`Z`X]Y`Ni`j`Yf`À`gg][ \_Y]h`i`bX`XYb`  
fY[ ]cbU`Yb`GW`i`hn]j`Yf`UggYbž`XYf`Xi`fW`X]YgY`fY[ Y`a`À`][ Yb`

HYghg [ Yk Å\`fY]ghYh'k ]fX"8]Yg'gc`hY'U`g`Zi bXUa YbhU`Yf  
6YghUbXhY]'XYf`BchZU`d`Ubi b[ `i bX`XYf`ghÅXh]gWYb`ϕZfUghfi \_hi f  
Ub[ YgY\Yb`k YfXYb"

## 9]b`GW f]hh`b`X]Y`Ni \_i bZh

8]YgYf`GW f]hh`ni f`fY[ Y`a Å»][ Yb` , VYfd fØZi b[ `XYf`G]fYbYb` ]gh`Y]bY  
j YfUbhk cfhi b[ gj c`Y`9bhgWY]Xi b[ `XYf`GhUXhj Yfk U`hi b[ `i bX  
gc`hY`Ui W`j cb`UbXYfYb`GhÅXhYb`U`g`J cfV]'X`X]YbYb"9]bY` [ i h  
Zi b\_h]cb]YfYbXY`5`Ufa ]Yfi b[ [ ]Vh`XYb`6Øf[ Yfb`XUg`J YfhfUi Ybž  
XUgg`g]Y` [ i h[ YgW`Øhnh`g]bXž`i bUV`Åb[ ][ `j cb`XYb  
< YfUi gZcfXYfi b[ Ybž`X]Y`b`XYf`Ni \_i bZh`Ui Zg]Y`ni \_ca a Yb  
\_ÖbbhYb"

8]Y`9]bZØ\fi b[ `Y]bYg`k ÖWYb`h]WYb`G]fYbYbhYghg`b`7chVi`g`]gh  
HY]'`Y]bYf`i a ZUggYbXYfYb`GhfUhY[ ]Y`ni f`J YfVYggYfi b[ `XYf  
BchZU`\_ca a i b[\_Uh]cb`b`XYf`F Y[ ]cb"8]Yg`YfZc` [ hj cf`XYa  
< ]bhYf[ fi bX`ghY][ YbXYf`5bZcfXYfi b[ Yb`Ub`X]Y`G]WYf`Y]hi bX  
XYb`? UhUghfcd`YbgW`i hn"ϕ`NY]hYbž`]b`XYbYb  
9i hfYa k YhhYfYfY][ b]ggY`i bX`UbXYfY`? f]gYbg]hi Uh]cbYb  
ni bY`a Ybž`]gh`X]Y` : i b\_h]cbgZÅ\][ \_Y]h`gc`WYf`K UfbgmghYa Y  
i bYf`Ågg`]W`"Ni XYa`gd]Y`h`X]Y`GYbg]V`][g]Yfi b[ `XYf`6Yj Ö`\_Yfi b[  
\]bg]W`h]W`XYf`BchZU`k Ufbi b[ Yb`Y]bY` [ fc» Y`F c`Y`"Gc`k YfXYb  
X]Y`6Øf[ Yf`XUni`Ub[ Y`U`hYbž`X]Y`6YXYi hi b[ `XYf`G]fYbYbg][ bU`Y  
ni`j YfghY`Yb`i bX`YbhgdYfWYbX`XUfUi Zni`fYU[ ]YfYb"

8]Y`K ]YXYfUi ZbU`a Y`X]YgYf` : i b\_h]cbghYghg`YfZcfXYfh`Ui W`Y]bY  
Yb[ Y`Ni gUa a YbUfVY]h`nk ]gWYb`XYb`\_ca a i bU`Yb`6Y\ÖfXYb  
i bX`XYb`Öfh]WYb`F Yhi b[ gX]YbghYb"8]YgY` ; Ya Y]bgW`UZhUfVY]h  
]gh`YbhgWY]XYbXž`i a`F YU\_h]cbgnY]hYb`ni`a` ]b]a ]YfYb`i bX  
g]WYfni ghY`Ybž`XUgg`ja`9fbghZU`U`Y`6YhY][ ]hYb` [ YgW`i`h`g]bX  
i bX`\UbXY`b`\_ÖbbYb"8 Ug`@UbX`6fUbXYbVi f[ `Uh`VYfY]hg  
Å\b`]WY`ϕ]h]Uh]j Yb`b`UbXYfYb`GhÅXhYb`i a [ YgYhnhž`i a`X]Y  
5`Ufa ]Yfi b[ gZcfa UhY`ni`a`cXYfb]g]YfYb`i bX`X]Y`6Yj Ö`\_Yfi b[  
U\_h]j`Y]bni VYn]Y`Yb"

## 8 ]Y`hYW`b ]gW`Y`i bX`Z]bUb n]Y`Y`GY]hY

8]Y`A cXYfb]g]Yfi b[ `XYf`%+`G]fYbYb`]b`7chhVi g`\_cghYhY`fi bX  
%+`\$`\$\$`\$`9i fcž`X]Y`j ca `6i bX`VYfY]h[ YghY`h`k i fXYb``8]Yg`nY][ hž  
k ]Y`k ]W`h][ `X]Y`G]W`Yf`Y]hg]bZfUghfi \_hi f`ZØf`X]Y`6i bXYgfY[ ]Yfi b[  
]gh``8Yf`5i ghUi gW`i bX`X]Y`9fbYi Yfi b[ `XYf`G]fYbYb`g]bX`HY`  
Y]bYg`[ fØ»YfYb`D`Ubg`ni f`J YfVYggYfi b[ `XYg  
?UhUghfcd`YbgW`i hnYg`]b`[ Ubn`8Yi hgW`UbX``8]Y`G]fYbYb`gc``Yb  
b]W`h`bi f`U`\_i gh]gW`k UfbYbž`gcbXYfb`Ui W`j ]gi Y``Y`G][ bU`Y`[ YVYb  
gck ]Y`8i fW`gU[ Yb`Yfa Ø[ `]W`Ybž`i a `Y]bY`df`Ån]gY`ϕZcfa Uh]cb`XYf  
6Yj Ø`\_Yfi b[ `ni`[ Yk`Å`f`Y]ghYb``

8]Y`a d`Ya Ybh]Yfi b[ `bYi Yf`HYW`bc`c[ ]Yb`]b`X]Y`G]fYbYbž`k ]Y  
VY]gd]Y`gk Y]gY`X][ ]hU`Y`G][ bU`ØVYfhfU[ i b[ ž`\_Ubb`X]Y`9ZZ]n]Ybn`XYf  
K Ufbi b[ Yb`k Y]hYf`ghY][ Yfb``Gc`W`Y`GmghYa Y`g]bX`]b`XYf`@U[ Yž  
gdYn]Z]gW`Y`ϕZcfa Uh]cbYb`gW`bY``Yf`i bX`[ Yn]Y`hYf`ni`j YfVfY]hYbž  
k Ug`]b`BchZU``g]hi Uh]cbYb`YbhgW`Y]XYbX`gY]b`\_Ubb``i a `X]Y  
K ]f\_gUa \_Y]h`XYg`GmghYa g`ni`a U]a ]YfYbž`k ]fX`Ui W`X]Y  
fY[ Y`a`Å»][ Y`K Ufhi b[ `i bX`,`VYfdfØZ] b[ `XYf`5b`U[ Yb`Ya dZc`Yb``

## F Y`Yj Ubn`XYf`G]fYbYb`]b`XYf`Yi h][ Yb`NY]h

<]ghc f]gW`VYhfUW`hYh`UhhYb`G]fYbYb`Y]bY`gW`Øgg][ Y`F`c``Y  
k`Å`f`YbX`XYg`Nk Y]hYb`K Y`h\_f]Y[ gž`U`g`g]Y`j cf`@ ZhUb[ f]ZYb  
k UfbhYb``ϕ`XYf`B UW`\_f]Y[ gnY]h`V`]YVYb`G]fYbYb`Y]b`k ]W`h][ Yg  
K Yf\_nYi [ `ni f`?UhUghfcd`Ybk Ufbi b[ ž`k`Å`f`YbX`g]W`X]Y  
HYW`bc`c[ ]Yb`ghYhg`k Y]hYfYb`k ]W`\_Y`hYb``<Yi hni hU[ Y`[ ]Vh`Yg`Y]bY  
J]Y`nU`j`cb`K UfbgmghYa Ybž`XUfi bhYf`5ddg`i bX`X][ ]hU`Y`5`Yfh!  
8]YbghY``8YbbcW`V`Y]Vh`X]Y`Å`hYfY`G]fYbYb`hYW`bc`c[ ]Y`j`cb  
6YXYi hi b[ ž`XU`g]Y`Ui W`]b`; YV]YhYb`c`bY`ghUV]`Y  
ϕhYfbYhj YfV]bXi b[ `ni j Yf`Ågg][ `]gh``

8]Y`F`Y`Yj Ubn`i bX`XUg`J YfhfUi Yb`]b`G]fYbYb`gmghYa Y`k i fXYb  
Øb[ gh`]b`a UbW`Yf`<]bg]W`h`h`]bhYfZfU[ hž`VYgcbXYfg`]a`?cbhYi h  
XYf`ϕhY[ fUh]cb`]b`a cXYfbY`?ca`a`i`b]\_Uh]cbghYW`bc`c[ ]Yb``  
8YbbcW`hf`Å[ h`X]Y`K ]YXYfVY`YVi b[ `XYf`G]fYbYb`hYghg`]b`7chhVi g  
ni f`Gh`f`\_i b[ `XYf`F`Yg]`]Ybn`]b`XYf`; Ya Y]bgW`UZh`VY]ž`]bXYa`X]Y  
6Øf[ Yf`VYggYf`Ui Z`a`Ø[ `]W`Y`?f]gYb`j cfVYfY]hYh`k YfXYb``

: Øf`k Y]hYf[ Y`YbXY`ϕZcfa Uh]cbYb`ni`XYb`G]fYbYb]g][ bU`Yb`]b`XYf

F Y [ ] c b ' i b X ' X Y f Y b ' 6 Y X Y i h i b [ ' \_ Ò b b Y b ' ð h Y f Y g g ] Y f h Y ' X ] Y ' @ Y ] h g h Y ' ' Y ' @ U i g ] h n ' V Y g i W X Y b "

8 Y h U ] ` g

6 Y g i W X Y b ' G ] Y ' i b g ' U i Z . ' X ] Y ! b U W X f ] W X h Y b " b Y h